

**FIELD ELEMENTARY SCHOOL
WESTON, MASSACHUSETTS**

**WORK PLAN FOR THE
REMOVAL AND ENCAPSULATION
OF BUILDING-RELATED
POLYCHLORINATED BIPHENYLS**

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LIST OF ABBREVIATIONS AND ACRONYMS

CFR	Code of Federal Regulations
EH&E	Environmental Health & Engineering, Inc.
EPA	U.S. Environmental Protection Agency
HAZWOPER	Hazardous Waste Operations and Emergency Response
HEPA	high efficiency particulate air
ng/m ³	nanogram per cubic meter
OSHA	U.S. Occupational Safety and Health Administration
PCB	polychlorinated biphenyl
ppm	parts per million
School	Field Elementary School
Site	99 School Street, Weston, Massachusetts
Town	Town of Weston, Massachusetts
TSCA	Toxic Substances Control Act
μg/100 cm ²	microgram per 100 square centimeters
>	greater than
<	less than

1.0 SUMMARY

Environmental Health & Engineering, Inc. (EH&E) performed a thorough investigation to identify suspect polychlorinated biphenyl (PCB)-containing caulking, paint, and sealants throughout the Field Elementary School (the School) located at 99 School Street in Weston, Massachusetts (the Site). The Director of Public Facilities has indicated that the Town of Weston plans to decommission and replace the Field Elementary School within the next two years, currently estimated for 2014. As part of a proactive approach to hazardous material (PCB) characterization to support future planned demolition of the building, EH&E collected samples of building materials in a manner that accounted for the installation and application of paint and caulk/sealant materials, including an evaluation of any evidence indicating replacement or repair work. In addition, EH&E collected air samples from representative locations throughout the School.

The analytical results indicate the presence of PCBs in select caulk and paint associated with limited areas of the interior of the School. Concentrations of PCBs in these caulks and paints are above the allowable concentrations specified by the U.S. Environmental Protection Agency (EPA) in the Toxic Substances Control Act (TSCA) regulations (unauthorized). Locations of materials with PCBs above the allowable concentrations are described in the body of this report. Additional samples of other caulking and sealant materials were collected throughout the School and were determined to be well below 50 parts per million (ppm) of PCBs. These materials are being evaluated further to determine if they qualify as an “Excluded PCB Product” as noted in Title 40 Code of Federal Regulations Section 761.3 (40 CFR 761.3).

Concentrations of PCBs in air ranged from 37 nanogram per cubic meter (ng/m^3) to $159 \text{ ng}/\text{m}^3$ and were below EPA-recommended Public Health Levels for the age of school children at the School (fourth and fifth grade; $300 \text{ ng}/\text{m}^3$). The air sampling was conducted in the summer when indoor PCB concentrations are expected to be the highest due to temperature; evidence indicates that airborne PCB concentrations during the school year will be lower with lower ambient temperatures (MacIntosh, et. al, 2012).

In response to the bulk sampling results, Compass Project Management, on behalf of the Town of Weston, contracted EH&E to develop and submit an abatement protocol to

address the presence of unauthorized PCBs. Because initial airborne concentrations of PCBs are below the EPA guideline values (EPA, 2012), this plan focuses on eliminating dermal exposures to PCBs in source materials. On behalf of the Town of Weston we are requesting expedited approval for source removal of approximately 1,400 linear feet of PCB caulk at interior transition joints (identified in Appendix A). Also, we are requesting cleaning and encapsulation of both the porous building materials adjacent to the caulk as well as encapsulation of approximately 3,100 square feet of PCB-containing paints located at the lower level of the building. This request for a risk-based disposal approval is being made under 40 CFR 761 .61(c) as an interim effort to mitigate potential dermal exposures in the School prior to re-occupancy in early September 2012. Removal of indoor source material will also decrease airborne PCB concentrations. In order to meet this goal, removal of caulking materials and encapsulation processes will need to begin by August 13, 2012.

The work will include the removal of the PCB caulk associated with the accessible portions of the vertical transition joints throughout the interior of the School. Most of these locations are fully accessible. In a small number of areas built in cabinets or bulletin boards cover the caulk. At these locations, EH&E proposes to leave the caulk in place under an operations and management plan until building demolition. Work will also include the cleaning of porous and non-porous materials that are in contact with the PCB caulking prior to applying an encapsulant that will be used to seal the residual PCBs within the porous substrates.

In addition, accessible paints containing PCBs at concentrations above 50 ppm will be encapsulated. It is possible that additional areas with PCB-containing paints exist below resilient flooring or behind drywall, finished walls on the ground floor of the building. At these locations, the paints, if present, do not present a dermal hazard. EH&E proposes that inaccessible paints be managed in place under an operations and management plan until building demolition. The work, as proposed, provides an equivalent level of protection and does not pose an unreasonable risk of injury to human health and the environment.

Abatement of caulk and encapsulation of paint in all common areas accessible by students is anticipated to be completed by August 20, 2012; abatement of all paint in areas accessible to students is anticipated to be completed by August 20, 2012.

2.0 CASE NARRATIVE

2.1 BUILDING AND CASE HISTORY

The Field Elementary School is a three story building including the basement. The School was originally constructed in 1952 and the Town of Weston (the Town) anticipates complete demolition of the building in 2014.

The initial investigation was part of a hazardous materials assessment conducted to support future demolition of the building. PCB sampling and analysis of building materials conducted in June, 2012, determined that one type of caulk associated with interior vertical transition joints consistently contains concentrations of PCBs exceeding 10,000 ppm. EH&E estimates that the School contains approximately 1,400 linear feet of caulking associated with the vertical transition joints. In addition, EH&E sampled water-proofing and heavy use area paints in the basement of the building and identified three types of paint that contain concentrations of PCBs exceeding 50 ppm. These paints include floor paint in the shop, isolated stairwells, and loading dock areas, and wall paint in a portion of the cafeteria. Analytical results for PCB samples are presented in Tables 2.1 through 2.4.

2.2 RATIONALE FOR TESTING PROGRAM

The underlying goal of the testing process was for the Town to take a proactive approach to hazardous material (PCB) characterization to support future planned demolition of the building. The follow-up sampling was designed to characterize the extent of PCB-containing materials that would require abatement and/or removal from the School. The following sections describe the results of EH&E's sampling plan that was designed to ensure that representative samples were collected.

2.3 BULK SAMPLE RESULTS

A summary of the sample results from the collection of caulk samples found at the School are presented in Tables 2.1 and 2.2. The initial investigation was performed on June 6, 2012, to identify caulk containing concentrations >50 ppm of PCBs. Representative samples were collected from caulk and sealant materials throughout the interior and exterior of the building. Follow-up sampling was conducted on

June 29, 2012, and focused on determining the extent of the caulk that was identified in the stairwells on June 6. Figures A.1 – A.9 in Appendix A provide the locations where the samples were collected.

EH&E collected samples in a manner to investigate the installation and application of caulking materials, including an evaluation of any evidence indicating window caulking replacement or repair work. Because many of the hallway and classroom caulk locations are painted, sampling was conducted to evaluate homogeneity.

Eleven unique types of caulking were identified and sampled. One of the eleven types of caulking contained PCB concentrations between 15,400 and 45,900 ppm as Aroclor 1254. In addition, grey paint in the loading dock area, red paint on the stairs to the gym, and grey paint underlying blue paint on exterior walls of the cafeteria contain concentrations of PCBs between 12.2 and 886 ppm, also as Aroclor 1254 (Tables 2.1 and 2.2).

Table 2.1 Bulk Sample Results for Polychlorinated Biphenyls, Field Elementary School, Weston, Massachusetts, June 6, 2012			
Sample ID	Material Location	Material Description	Aroclor 1254^{1,2} (ppm_w)
134273	Roof slate, north face chimney	Off-white caulking	ND (<1.080)*
134274	Roof slate, east face chimney	Off-white caulking	ND (<0.484)
134275	Roof, east face chimney	Red caulking on brick	ND (<0.574)
134276	Roof, north face chimney	Red caulking	ND (<0.522)
134277	Roof, west face, north side of window	Tan caulking on metal	5.90
134278	Roof, south face, west side of panel wood	Tan caulking on metal	ND (<2.010)*
134279	Roof, south face	White caulking on wood panel	ND (<0.213)
134280	Roof, south face	White caulking on wood panel	ND (<0.112)
134281	Roof, south face, brick and metal joints	White over black caulking	ND (<0.612)
134282	Roof, north face, brick and metal joints	White over black over grey caulking	ND (<0.402)
134283	Roof, south side, vent stack	Grey caulking around vent stack	ND (<11.6)*
134284	Roof, south side, vent stack	Grey caulking around vent stack	ND (<12.9)*
134285	Roof, west face, below metal flashing	Black flashing cement on metal flashing	ND (<11.7)*
134286	Roof, north side perimeter	Black flashing cement	ND (<1.28)*
134287	Second floor, outside elevator, interior brick to CMU	Light grey caulking, brick to CMU	ND (<3.36)*

Table 2.1 Continued

Sample ID	Material Location	Material Description	Aroclor 1254^{1,2} (ppm_w)
134288	Second floor, outside elevator, interior brick to caulk	Light grey caulking, brick to CMU	ND (<6.61)*
134289	Second floor, Music room, interior window caulking	Tan caulking, metal to metal	3.76
134290	Second floor, Music room, interior window caulking (duplicate)	Tan caulking, metal to metal	3.49
134291	Second floor, Room 20, interior window caulking	Tan caulking, metal to metal	2.71
134292	First floor, stairs outside Room 10	Light grey caulking, CMU to ceramic tile	30,400
134293	First floor, stairs outside Room 10	Light grey caulking, CMU to ceramic tile	34,500
134294	First floor, Room 12, interior window caulking	Tan caulking, metal to metal	2.23
134295	First floor, Room 15, interior window caulking	Tan caulking, metal to metal	7.00
134296	First floor, stairs near Room 17	Light grey caulking, CMU to ceramic tile	45,900
134297	Basement, stair above door	Light grey caulking, CMU to ceramic tile	21,700
134298	Basement Room 3, interior window tile caulking	Tan caulking, metal to metal	3.32
134299	Basement Room, interior window caulking	Tan caulking, metal to metal	3.31
134300	Basement, stair expansion joint	Black caulking, CMU to CMU	1.90
134301	Basement, stair expansion joint, ceiling caulking	Brown, rigid, used as intermittent sealant	ND (<4.84)*
134302	Basement, stair expansion joint, ceiling caulking	Brown, rigid, used as intermittent sealant	ND (<3.36)*
134303	Basement Cafeteria, subgrade wall paint	Blue wall paint	12.2
134304	Basement Loading Dock, slab paint	Grey slab paint	783
134305	Exterior, frame to brick window caulking	White caulking	ND (<0.290)
134306	Exterior, frame to brick window caulking	White caulking	ND (<0.300)
134307	Exterior, door frame	Grey caulking, wood to cinder block	32.6

ppm_w parts per million by weight
 ND none detected
 CMU concrete masonry unit

¹ PCB concentration analysis performed by Alpha Analytical, Inc., using U.S. Environmental Protection Agency (EPA) Method 8082 with Soxhlet extraction.

² Aroclor 1016, 1221, 1232, 1242, 1248 and 1260 also tested. All results below reporting levels, unless noted.

* Elevated detection limit due to dilutions required due to presence of non-target compounds

Table 2.2 Bulk Sample Results for Polychlorinated Biphenyls, Field Elementary School, Weston, Massachusetts, June 29, 2012

Sample ID	Material Location	Material Description	Aroclor 1254^{1,2} (ppm_w)
134312	Second floor hallway between Rooms 20 + 22	Grey Caulk bead over mortar between CMU	19,000
134313	Second floor hallway between Rooms 20 + 22	Grey Caulk bead over mortar between CMU	21,600
134314	Second floor hallway between Rooms 20 + 22	Grey Caulk bead over mortar between CMU	31,000
134315	Second floor outside boys room	Grey Caulk bead over mortar between CMU	16,300
134316	Second floor room 27	Grey Caulk bead over mortar between CMU	23,500
134317	Second floor room 24	Grey Caulk bead over mortar between CMU	20,000
134318	Second floor boys room	Grey Caulk bead over mortar between CMU	12,400
134319	Main floor entry between doorframe and CMU	Grey Caulk bead over mortar	19,800
134320	Main floor Hall at column outside boys room	Grey Caulk bead over mortar between CMU	30,000
134321	Main floor Girls room near elevator	Grey Caulk bead over mortar between CMU	15,400
134322	Main floor Hall outside 16	Grey Caulk bead over mortar between CMU	29,700
134323	Main floor Room 18	Grey Caulk bead over mortar between CMU	24,900
134324	Main floor Room 14	Grey Caulk bead over mortar between CMU	21,300
134325	Main floor Room 11	Grey Caulk bead over mortar between CMU	17,600
134326	Ground Floor Hall across from Room 7	Grey Caulk bead over mortar between CMU	23,100
134327	Ground Floor Hall next to Room 7 entrance	Grey Caulk bead over mortar between CMU	31,500
134328	Ground Floor hall behind column outside Room 2	Grey Caulk bead over mortar between CMU	20,200
134329	Room 4 under desk	Grey Caulk bead over mortar between CMU	26,100
134330	Ground Floor Hall outside room 4	Grey Caulk bead over mortar between CMU	20,900
134331	Ground Floor custodial room	Grey floor paint	10.9
134332	Ground Floor boiler room	Grey floor paint	3.12
134333	Ground Floor Cafeteria	Blue wall paint on sub grade foundation	85.2
134334	Ground Floor stairs to gym	red floor paint	333
134335	Ground Floor stairs to gym	red floor paint	886

Table 2.2 Continued

ppm_w parts per million by weight
CMU concrete masonry unit

¹ PCB concentration analysis performed by Alpha Analytical, Inc., using U.S. Environmental Protection Agency (EPA) Method 8082 with Soxlet extraction.

² Aroclor 1016, 1221, 1232, 1242, 1248 and 1260 also tested. All results below reporting levels, unless noted.

Samples with concentrations greater than 50 ppm are over the allowable threshold for authorized use, as specified in the EPA TSCA regulation (40 CFR 761). The results indicate that the extent of PCB-containing materials at the property are limited to one type of caulk material and paint in several areas. Following the discovery of PCBs in these samples, representatives from the Town contracted EH&E to conduct further exploratory work to determine the migration of PCBs in adjacent porous building materials, and evaluate airborne PCB concentrations.

Materials with concentrations <50 ppm will not be addressed during this abatement project. The materials are being evaluated to determine if they qualify as an "Excluded PCB Product" per 40 CFR 761.3. This project is being performed to specifically address caulk and paint with concentrations >50 ppm.

2.4 AIR SAMPLING DATA

On July 11, 2012, EH&E conducted air monitoring at nine indoor locations and one outdoor location at the School. Samples were collected over an approximately 8 hour time period, and sent to the laboratory under chain of custody for extraction and analysis via EPA Methods 3540C and 680/8270C (SIM(M)), respectively. Results of analysis of these samples are provided in Table 2.3; sampling locations are provided in Appendix A and the laboratory report is provided in Appendix B.

Concentrations of total homologs at indoor locations ranged from 37 ng/m³ to 159 ng/m³ (median = 79 ng/m³; average = 85 ng/m³). These concentrations are consistently below EPA's recommended limit of 300 ng/m³ for children between the ages of 6 and 12 years

(the school is occupied by fourth and fifth grade students), and well below the recommended limit of 450 ng/m³ for adults.

Results of the air samples collected in the School indicate that airborne concentrations do not exceed the screening level indoor air values provided by the EPA. These samples were collected during typical hours of building occupancy under summer conditions with the windows and doors closed at sample locations, and the unit ventilators not operating. Unit ventilators were inspected and accessible portions within the cabinets do not contain insulation or other materials suspected of containing PCBs.

Table 2.3 Air Monitoring Results Summary, Field Elementary School, Weston, Massachusetts, July 11, 2012		
Sample ID	Location	Total PCB Homologs (ng/m³)
136736	Second floor corridor	115
136737	Gym	37
136738	Room 14	52
136739	Room 14	52
136740	Room 15	58
136741	Cafeteria	72
136742	Room 7	86
136743	Basement Corridor	159
136744	Loading dock	100
136745	Room 27	114
136746	Outdoors	ND
136747	Field blank	ND
ND not detected		
PCB concentration analysis performed by Alpha Analytical, Inc., using U.S. Environmental Protection Agency (EPA) Method 680/8270C (SIM(M))		

Results of the homolog analysis of air samples indicate somewhat consistent distribution of homologs among the samples with pentachlorobiphenyls and tetrachlorobiphenyls predominating and observed in all samples. Pentachlorobiphenyls were typically found at the highest concentrations. Less frequently (4 samples) trichlorobiphenyls and (4 samples) hexachlorobiphenyls were detected. Laboratory reports are included in Appendix B, and Table C.1 includes the homolog concentrations for each sample.

2.5 POROUS MATERIALS SAMPLING

On July 12 and 13, 2012, EH&E performed follow up sampling to determine the extent of PCB contamination in porous surfaces surrounding the caulk with PCB concentrations above the allowable concentrations. These materials included concrete block, brick, and glazed concrete blocks. The testing was performed to identify the extent of PCB migration from caulk into these materials. Sample locations are illustrated in Appendix A.

Each bulk sample of porous building materials was collected either adjacent to the caulk or at a distance of two inches from the adjacent caulk line. The bulk samples consisted of composite core samples from the surface with a depth no greater than one half of one inch. EH&E collected all bulk samples from porous material in contact with or near the specified caulking following the EPA 1997 *Draft Standard Operating Procedures for Sampling Concrete in the Field* to determine the concentration of PCBs in the porous materials in contact with the PCB caulk. The caulk is most commonly in contact with concrete block and less frequently in contact with ceramic block and brick.

Sample results are included in Table 2.4 and laboratory reports are included in Appendix B. Concentrations of PCBs in porous materials adjacent to the specified caulk ranged from 653 to 0.09 total PCBs (Aroclor 1254); at a distance of 2" from the caulk concentrations in porous materials ranged from 65.2 to 0.135 ppm total PCBs, primarily Aroclor 1254. At one location Aroclor 1242 was detected at a low concentration (0.557 ppm). At 10 of the 15 locations sampled at a distance of 2" from the bead of caulk, concentrations were less than 20 ppm total PCBs. At locations immediately adjacent to the caulk bead concentrations exceeded 100 ppm in 10 of 15 locations.

Table 2.4 Results of PCB Analysis of Porous Materials Samples, Field Elementary School, Weston, Massachusetts

Sample ID	Material Location	Material Description	Aroclor 1254 ^{1,2} (ppm _w)
July 12, 2012			
136748	Basement hall outside room 7	CMU Adjacent to caulk bead: colocated with 134327	653
136749	Basement hall outside room 7	CMU 2" away from caulk bead colocated with 134327	65.2
136750	Classroom 4 inside lower wall by door	CMU adjacent to caulk bead: colocated with 134329	273
136751	Classroom 4 inside lower wall by door	CMU 2" away from caulk bead: colocated with 134329	17.4
136752	Outside first floor boys bathroom wall	CMU adjacent to caulk bead: colocated with 134320	182
136753	outside first Floor boys bathroom wall	CMU 2" away from caulk bead: colocated with 134320	13.8
136754	First floor next to room 11 center stairwell	Ceramic Tile adjacent to caulk bead: colocated with 134292	4.34
136755	First floor next to room 11 center stairwell	Ceramic Tile 2" away from caulk bead: colocated with 134292	0.722
136756	Room 11 corner by door inside	CMU adjacent to caulk bead: colocated with 134325	82.3
136757	Room 11 corner by door inside	CMU adjacent to caulk bead: colocated with 134325	85.9
136758	Room 11 corner by door inside	CMU 2" away from caulk bead: colocated with 134325	8.04
136759	Outside classroom 16	CMU adjacent to caulk bead: colocated with 134322	412
136760	Outside classroom 16	CMU 2" away from caulk bead: colocated with 134322	24.8
136761	Corner outside class room 18 by door	CMU adjacent to caulk bead: colocated with 134323	164
136762	Corner outside class room 18 by door	CMU 2" away from caulk bead: colocated with 134323	8.97
136763	Second floor next to boys bathroom	CMU adjacent to caulk bead: colocated with 134315	191
136764	Second Floor next to boys bathroom	CMU 2" away from caulk bead: colocated with 134315	23.2
136765	Between classroom 20 and 22	CMU adjacent to caulk bead: colocated with 134312	560
136766	Between classroom 20 and 23	CMU 2" away from caulk bead: colocated with 134312	15.6
136767	Classroom 24 inside by door	CMU adjacent to caulk bead: CMU colocated with 134317	349
136768	Classroom 24 inside by door	CMU adjacent to caulk bead: colocated with 134317	14
136769	Classroom 24 inside by door	CMU adjacent to caulk bead: colocated with 134317	5.84

Table 2.4 Continued			
Sample ID	Material Location	Material Description	Aroclor 1254^{1,2} (ppm_w)
July 13, 2012			
136770	Hall by second floor elevator	Brick adjacent to caulk bead: colocated with 134288	0.090
136771	Hall by second floor elevator	Brick 2" away from caulk bead: colocated with 134288	0.135
136772	Hall by second floor elevator	CMU adjacent to caulk bead: colocated with 134288	0.503
136773	Hall by second floor elevator	CMU 2" away from caulk bead: colocated with 134288	0.941 Aroclor 1242 0.557
136774	Boys bathroom second floor	Ceramic tile adjacent to caulk bead: colocated with 134318	45.9
136775	Boys bathroom second floor	Ceramic tile 2" away from caulk bead: colocated with 134318	8.31
136776	Classroom 27 by front door	CMU adjacent to caulk bead: colocated with 134316	320
136777	Classroom 27 by front door	CMU 2" away from caulk bead: colocated with 134316	6.26
136778	First floor front entry	CMU adjacent to caulk bead: colocated with 134319	297
136779	First floor front entry	CMU 2" away from caulk bead: colocated with 134319	22.5
136780	First floor by room 18 stairway	CMU adjacent to caulk bead: colocated with 134296	568
136781	First floor by room 18 stairway	CMU adjacent to caulk bead: colocated with 134296	546
136782	First floor by room 18 stairway	CMU 2" away from caulk bead: colocated with 134296	17.3
PCB polychlorinated biphenyl ppm _w parts per million by weight CMU concrete masonry unit ¹ PCB concentration analysis performed by Alpha Analytical, Inc., using U.S. Environmental Protection Agency (EPA) method 8082 with Soxhlet extraction. ² Aroclor 1016, 1221, 1232, 1242, 1248 and 1260 also tested. All results below reporting levels, unless noted.			

2.6 OVERVIEW OF ABATEMENT GOALS

At a minimum, the abatement activities will involve the removal of specified PCB-containing caulk that contains levels of PCBs greater than 50 ppm as bulk product waste. Adjacent porous surfaces will then be wiped clean using CAPSUR®, a solvent designed for removal of PCB residues following bulk removal. The porous material

adjacent to the caulked joints will then be sealed to a distance of approximately 6 inches in both directions from the caulk locations with an encapsulant (Sikagard 62) approved by EPA for this purpose. Painted surfaces with concentrations of PCBs in paint that exceed 50 ppm will also be encapsulated with an EPA-approved encapsulant (Sikagard 62).

Upon completion of encapsulation activities, representative sections of the encapsulated areas will be sampled using surface wipes to determine if the risk-based criterion set forth by the EPA of 1 microgram per 100 square centimeters ($\mu\text{g}/100\text{ cm}^2$) or less is met. Confirmatory sampling and analysis methods and frequencies are discussed in Section 10. All aspects of the abatement project will be performed in compliance with the EPA TSCA requirements and protect public health and the environment. Materials that are classified as PCB remediation or bulk product waste will be disposed in compliance with federal and state regulatory requirements.

3.0 REGULATIONS, PERMITS, AND QUALIFICATIONS

The contractor(s) hired to perform the abatement of the PCB-containing materials from the School shall be responsible for obtaining all permits necessary to execute work conducted. The cost for securing all necessary permits shall be included in the contractor's submittal to the Town. The contractor(s) shall be responsible for adhering to all applicable federal, state, and local rules and regulations including, but not limited to, those from the EPA, Massachusetts Department of Environmental Protection, U.S. Occupational Safety and Health Administration (OSHA), and the Weston Fire Department.

The contractor(s) shall conform to all stipulations and permits identified in the contract bid documents, including any conditions set forth in the EPA approval. Where a conflict arises between regulations, the contractor shall adhere to the most stringent regulation. The contractor shall also confer with the project engineer to determine if the abatement procedures and/or materials conflict with the project specifications.

3.1 FIRE SAFETY AND EMERGENCY ACTION PLANS

Effective December 11, 1980, OSHA revised its fire safety standards and now requires written emergency action and fire prevention plans. The contractor will prepare emergency action and fire prevention plans that are fully compliant with all applicable regulations prior to the commencement of abatement activities. For abatement projects, the plans must include:

- Emergency escape procedures and routes.
- The procedure for announcing emergencies.
- The procedures to account for all employees after evacuation.
- The rescue and medical duties of personnel.
- A list of all major workplace fire hazards.
- The names and/or job titles of people responsible for the maintenance of the fire prevention equipment.
- The name of the person in charge of any fuel on the job.
- The names and/or job titles of people to be contacted for information about the job.

- Hot work permit procedures, if necessary.

3.2 STANDARD OPERATING PROCEDURES

The Town of Weston requires that the contractor prepare a written health and safety plan and a written abatement work plan specific for the interior remediation and abatement work. The health and safety plan and the work plan must ensure maximum protection of workers, visitors, and employees from PCB exposure and must prevent the release of PCBs or PCB-laden dust into the environment. These procedures should include, but are not limited to, the following:

- Engineering controls and work practices to minimize airborne contamination into the work area and to prevent the spread of such contamination outside the work area. These controls and practices instituted during abatement activities must keep workers' exposures to PCBs below the permissible exposure limit and ensure no release of PCBs from the work area.
- Specifications regarding containment processes to prevent the release of abatement debris from the work area. The containment systems may be developed to address the unique situations for each location where PCB caulk is present. At a minimum, the unit ventilator air intakes in the workspace, and any other areas where airborne contaminants could enter the building from the workspace, must be covered with protective polyethylene sheeting.
- Directions regarding pre-cleaning of the work area with a high efficiency particulate air (HEPA)-filtered vacuum.
- Specifications for sufficient and proper protective clothing and respiratory protection equipment for entrance into the work space from the outside, as may be required by OSHA regulations.
- Specifications for safe work practices in the workplace and exclusion of eating, drinking, smoking, or in any way breaking the respiratory protection, if respirators are required.

- Removal methods that minimize the amount of airborne dust generated from abatement activities.
- Specifications regarding end of work shift cleaning procedures.
- Specifications regarding the handling, storage, transport, and disposal of all appropriately classified PCB waste in a manner that minimizes exposure and that complies with federal, state, and local regulations regarding PCBs.
- Specifications identifying disposal sites for PCB waste.
- Specifications regarding possible contingency plans pertaining to accidental spills and/or contamination in the work area or outside the work area.
- Rules regarding mandatory and proper use of decontamination facilities when exiting the work area.
- Directions regarding the cleaning of work areas following abatement procedures.
- Supervision of work by a competent person.
- Conducting work when the School is not occupied by staff or students.

In addition, the submitted work plan should provide sufficient detail to describe specific plans and actions. Moreover, where applicable, the work plan may reference this document, but will still need to be of sufficient detail in its descriptions.

3.3 TRAINING AND CERTIFICATION

All personnel performing abatement activities at the School must have all the required training, medical examinations, and respirator fit testing (if required) as specified by OSHA including but not limited to current Hazardous Waste Operations and Emergency Response (HAZWOPER) 40 hour training. The contractor must at all times have a competent manager at the job site. Site-specific hazards and hazards associated with

the handling and disposal of PCB products material must be effectively communicated to the contractor's staff to minimize potential exposures. Completion of a Hazard Communication program in conformance with the elements of OSHA 29 CFR 1926.59 is required. In addition, the contractor must provide proper training and equipment for all safety-related issues. Please refer to Section 12 for more details on the health and safety requirements.

3.4 CONTRACTOR QUALIFICATIONS

The contractor shall demonstrate the following minimum requirements and competencies in accordance with the requirements specified by the Town of Weston.

- Experience in surface cleaning and decontamination of PCB-contaminated educational facilities will be preferential, but not a necessary requirement. Experience in surface cleaning and decontamination of PCB-contaminated building materials is required. Caulk abatement bidders will provide project examples and references for three PCB abatement projects completed within the last 5 years.
- Maintain and operate a fully functioning health and safety program dealing with the cleanup of hazardous materials and substances in or on commercial real estate.
- Maintain sufficient equipment, materials, and staff to complete the scope of work as outlined in this specification. A complete list of permanent staff, equipment, and materials shall be provided in the bid submission.
- Knowledge of the federal TSCA regulations.
- All licenses required for hazardous material abatement in full accordance with all applicable regulations.

4.0 SCOPE AND SCHEDULE

4.1 SCOPE

The scope of work for the abatement project addresses the specified PCB-containing interior grey caulking and specified PCB-containing paints. Work includes the removal of specified PCB-containing caulking and the cleaning and encapsulation of porous and non-porous surfaces adjacent to the PCB caulk. Specified PCB-containing paints will also be encapsulated. The scope of materials requiring abatement is summarized in Table 4.1.

Table 4.1 List of PCB-containing Materials and Approximate Quantities, Field Elementary School, Weston, Massachusetts		
Material/Process Description	Material Location	Approximate Quantity
Removal of expansion joint caulk, grey, over joints in CMU mortar and transitions between CMU/columns/ceramic tile	Various locations, throughout	1,500 LF
Extraction/cleaning of PCB caulking locations	Various locations, throughout	1,500 SF
Encapsulation of PCB caulking locations	Various locations, throughout	1,500 SF
Encapsulation of PCB floor paint, grey	Ground floor: workshop, loading dock, unassigned and storage rooms	2,000 SF
Encapsulation of PCB wall paint, light blue over grey	Ground floor: cafeteria	300 SF
Encapsulation of PCB floor paint, red	Ground floor: stairs to gym	250 SF
PCB polychlorinated biphenyl CMU concrete masonry unit LF linear feet SF square feet		

The abatement contractor shall supply all labor, materials, and equipment necessary to carry out the scope of work detailed in this document in a professional manner. The abatement contractor shall be required to submit for review and approval a work plan to the Town and EH&E detailing his/her planned abatement activities at the Site. The plan should include, at a minimum, a description of the removal activities, engineering controls, decontamination activities, and reporting. Final acceptance of the work is predicated on obtaining successful testing and inspection results (see Section 10).

4.2 WORK SEQUENCE

The removal of PCB caulk and decontamination will consist of the following general elements:

- Site isolation and protection
- Source containment and removal
- Material disposal
- Decontamination and/or removal of PCB residues
- Inspection/surface testing of non-porous material
- Encapsulation
- Acceptance testing and verification

Encapsulation of painted surfaces will consist of the following general elements:

- Site isolation and protection
- Surface cleaning with HEPA filtration vacuums
- Encapsulation
- Acceptance testing and verification

It is anticipated that the caulk abatement and paint encapsulation will be conducted by two different contractors.

4.3 SCHEDULE

All work shall be performed within the Town's allocated time period for remediation activities. The abatement contractor shall closely coordinate his/her schedule with other contractors' schedules to expedite the work, as necessary.

The caulk abatement work is anticipated to take place during weekday hours beginning the week of August 13, 2012, and must be completed by August 20, 2012. It is anticipated that paint encapsulation will begin in early August 2012 in the cafeteria, loading dock, and at the gym stairs, with completion by August 20, 2012. Encapsulation

of paint in the shop areas may need to be completed during off-hours and weekends if not complete by September 1, 2012.

Completion is defined as successfully satisfying all elements of this specification, including meeting all the inspection and testing requirements. The caulk abatement work is anticipated to take one week to complete, with an additional several days scheduled for testing. The abatement contractor(s) will have to confirm the project schedule in writing during the first day of the work. Final approval of the schedule will be at the discretion of the Town and the revised schedule must address coordination issues with other contractors.

5.0 UTILITIES

The Town will provide electrical power for the remediation contractor consistent with information provided in the contract documents; additional work to distribute power will be the responsibility of the contractor. Water will be provided on-site consistent with the contract documents. The abatement contractor will have to make arrangements to distribute all needed water for abatement and cleaning activities.

5.1 WATER SYSTEMS

All water systems running through the work area and not being used must be shut off at the source. For any system that must be left on, the location of a shut-off valve must be clearly marked on the emergency plan. Water systems used by the contractor should be consistent with the Town's requirements for the work activity.

5.2 ELECTRICAL SYSTEMS

Appropriate electrical systems that may pose a hazard during the abatement process must be shut down when the area is being abated or cleaned. The power must be locked out at the control panel, and those individuals that have the ability to reenergize the area must be in close contact with the contractor and the remediation staff. The lockout of electrical systems must be conducted in accordance with the contractor's lockout/tagout safety program. Ground-fault circuit interrupters must be used for all temporary power supplies and extension cords; no exceptions.

6.0 SITE PREPARATIONS

6.1 GENERAL CONDITIONS

All work is anticipated to be performed inside the school building. In order to contain debris and to protect area occupants and the environment, the contractor shall use a sufficient containment system and/or work practices that prevent the migration of material and or dust outside of the work space, including covering unit ventilator air intakes.

The work area shall be delineated by caution tape extending a minimum of six feet beyond the immediate work area. The secured work area will be large enough to include all contractor equipment that is actively being used during the removal and remediation, and to protect building occupants or visitors.

Two layers of six-mil polyethylene sheeting shall be installed below the work area and secured to prevent trip/slip hazards. The sheeting shall extend sufficiently beyond the area to be abated to prevent contaminating the ground with dust or debris.

Work areas will be placed under negative pressure and vented to the outdoors utilizing high efficiency particulate air (HEPA) filtration units to achieve a minimum of four air changes per hour.

Furniture and other moveable objects within the classrooms will be covered with one layer of six-mil polyethylene sheeting prior to the initiation of abatement activities. School staff will remove all moveable objects from the abatement areas prior to the initiation of abatement activities.

Decontamination of equipment used during removal and remediation of PCB-contaminated materials will be performed in accordance with 40 CFR 761.79 that will include disposing of porous equipment, such as wipers, coveralls, rags, etc, used during removal and remediation as PCB remediation waste. Non-porous equipment and tools will be decontaminated at the end of each shift and at the end of the project by cleaning all exposed surfaces with a clean rag and mineral spirits to remove any potential PCB

residues. The rag will be disposed of as PCB remediation waste. No free liquid waste materials are expected to be generated during the remediation activity.

During the cleanup/and decontamination activities, the contractor and/or the Town's designated representative will perform routine inspections to ensure that areas outside of the remediation containments remain free of contamination. If small amounts of bulk PCB caulking associated with the remediation are observed outside or under areas that are covered with protective polyethylene sheeting:

- The area where the debris is observed will be delineated and segregated using, at a minimum, barrier tape to prevent unauthorized access.
- The area will be immediately cleaned free of observed debris using HEPA-filtered vacuuming, and manual collection methods.

If widespread contamination (greater than five square feet of PCB caulking or associated debris) is observed:

- The area where the debris is observed will be delineated and segregated using, at a minimum, barrier tape to prevent unauthorized access.
- Bulk sampling of the debris will be collected and analyzed using 24-hour rush turnaround time to determine PCB content.
- The area will be immediately cleaned free of observed debris.
- Further evaluation of the extent of potential contamination and clean-up methods will be performed based on results of bulk debris sampling.

6.2 SITE ISOLATION

During the abatement work, the contractor will need to address security and access concerns as part of the project. The contractor will need to coordinate with the Town and EH&E to address site isolation issues. In addition, the contractor will need to document site isolation issues in the work plan submittals.

6.3 WASTE CONTAINERS

The contractor shall obtain and locate the approved PCB waste containers on-site. The contractor will coordinate the location of the PCB waste containers staff, the Town representative, and the Town's designated environmental consultant. The PCB waste containers shall be clearly marked as such to avoid confusion with ordinary waste containers. The contractor shall submit a waste handling and storage plan for approval.

7.0 MATERIAL STORAGE AND HANDLING PROCEDURES

7.1 PCB BULK PRODUCT WASTE MATERIALS

PCB bulk product waste (e.g., caulking) shall be handled in a manner to avoid the breakdown of these materials into fine dust or powders. These materials shall be removed whole, without breakage if possible. Once removed, these materials shall be placed in the lined container or into an appropriate temporary container (e.g., 6-mil polyethylene disposal bag) for transport into the PCB container at the end of the work shift. PCB waste and PCB-containing items shall be stored for disposal in accordance with 40 CFR 761.40 and 40 CFR 761.65. If temporary waste containers are used, then the Town's environmental consultant must approve all temporary containers that will store PCB bulk product waste. Commercial grade plastic or hard rubber trash barrels lined with a single 6-mil plastic disposal bag and a lid are acceptable temporary containers. Once in the container, these materials will be covered and protected from the weather. All containers and temporary containers shall be clearly marked as PCB-containing waste materials.

Lined and covered barrels containing PCB materials will be marked with designations indicating that the PCB materials are contained in the barrel, as stated in 40 CFR 761.65(c)(1). All barrels and PCB-contaminated materials will be non-liquid materials. In addition, a tarp shall be used to prevent spillage onto the floor of the storage area. When not in use, barrels will remain covered by both lids and tarps. All areas containing PCB waste must be secured at the end of the day.

To ensure that the material storage areas will not be a possible source of contaminants, EH&E may conduct limited air monitoring at the storage site. Any dried and brittle PCB bulk product wastes require additional care, such as the use of a HEPA-filtered vacuum operating while removing the material, to prevent the inadvertent release of PCB dust or powder into the environment.

8.0 DISPOSAL

Disposal of all waste shall be in accordance with applicable state and federal regulations and sent to a licensed facility that will receive and retain PCB bulk product waste and PCB remediation waste, in accordance with EPA regulations under 40 CFR 761.61 and 40 CFR 761.62. All PCB bulk product waste and PCB remediation waste will be removed from the Site, and will be kept separate from other ordinary construction waste streams that the contractor may generate. This waste stream will be kept separate from other ordinary construction waste streams that can be recycled or reused. Copies of all bills of lading, waste shipment records, certificates of disposal, and any other documentation must be provided to the Town's project manager as proof of proper disposal of waste. Furthermore, copies of all manifests shall be provided to the EPA as part of the final summary report.

PCB bulk product and PCB remediation wastes will be stored according to applicable EPA TSCA regulations. The contractor shall ensure compliance with storage and marking requirements described in 40 CFR 761.40 and 40 CFR 761.65. The contractor shall also ensure that no visible emissions of dust will occur during the disposal of PCB bulk product and PCB remediation wastes into appropriate disposal containers.

The PCB bulk product waste and wastes generated as part of the remediation shall be disposed of in accordance with 40 CFR 761.62 and 40 CFR 761.61(b), respectively, at an appropriate landfill for such disposal. The contractor shall submit the name of the landfill with appropriate documentation to verify that it is capable of accepting PCB waste in accordance with these requirements.

9.0 ABATEMENT PROCEDURES

Contractors must obtain proper permits and conduct work in compliance with all applicable regulations, including the TSCA, the Resource Conservation and Recovery Act, and any other applicable federal, state, and local laws.

9.1 CAULK REMOVAL AND SURFACE CLEANING

Abatement procedures for the work shall consist of the removal of specified PCB-containing interior caulk. Porous materials in contact with the caulk will need to be cleaned and free of PCB residues in accordance with the following procedures.

- Cut and scrape caulking materials away from surfaces using hand tools.
- Clean up dust and residues with HEPA-filtered vacuuming and/or wet wiping techniques.
- A visual inspection of the caulk joints will take place to ensure that all visible PCB debris has been removed.
- Following removal and scraping, the concrete surfaces should be treated with the CAPSUR® PCB extraction solution according to the manufacturer's specifications. After extraction and final wipe down, no visible debris or residue should be present. This treatment should be conducted along the location of the caulk joint and 6-inches lateral from this joint.
- Lightly rinse the surface with water and wipe down to remove any residual CAPSUR® wash according to the manufacturers' guidelines. All PCB-contaminated water or liquids generated during the abatement process should be collected and stored in leak-proof containers and disposed according to 40 CFR 761.70 or decontaminated in accordance with 40 CFR 761.79(b)(1). Generation of liquids is to be minimized whenever possible.

- Surfaces cleaned of caulking will await visual inspection by a third party. Any surfaces that do not meet the visual clearance criteria will be re-cleaned to remove caulking residues.
- All bulk product and remediation waste must be handled according to the work plan, applicable state regulations and federal regulations cited by the EPA as risk-based approval conditions.
- Ensure that items designated as PCB remediation or bulk product waste are transported to the appropriate disposal dumpster via sealed bags or leak-tight containers.
- No chutes or other transport methods that may generate fugitive emissions may be used to convey PCB remediation or bulk product waste from the work area.
- The wipers and any solvent wash shall be collected for disposal as PCB remediation waste.
- All solvents must be stored and used in conformance with OSHA, EPA, and local fire department requirements and guidelines to minimize the hazard associated with the solvent.
- The contractor must specify work practices, procedures, and engineering controls that will be used to minimize entrainment of solvent vapors into the building and to protect workers from elevated exposures to vapors.
- A second visual inspection of the caulk joints will take place to ensure that all visible PCB debris has been removed.

9.2 ENCAPSULATION OF POROUS MATERIALS ADJACENT TO CAULK

- Once an initial visual inspection and has been completed and confirmed that no bulk PCB residues remain, an epoxy coating will be applied to the surfaces that were in contact with the PCB caulking. The specific protective epoxy coating will be Sikagard

62. This brand of encapsulant has been used in similar projects with success and is approved for use by the EPA. The encapsulant will be applied directly onto the exposed surface, extending out a minimum of 6 inches from the caulk joint.

- Upon completion of the application of epoxy coating, EH&E will conduct a second visual inspection as well as confirmatory wipe sampling on top of the cured epoxy to verify the completeness of the cleaning and encapsulation effort.
- Surfaces with wipe sample analytical results above the EPA approved limit will be resealed using the same epoxy material and additional sampling will be conducted as outlined in section 10.3.
- Once the sealant has dried and a visual inspection has been conducted, and the necessary confirmatory samples have been conducted (approximately 72 hours after application) new caulk can be applied.

9.3 ENCAPSULATION OF PAINTED SURFACES

- The surfaces will be cleaned of all visible dust and debris using a HEPA vacuum system. No sanding or abrasion of the surfaces will be permitted.
- An epoxy coating will be applied to the painted surfaces. The specific protective epoxy coating will be Sikagard 62. This brand of encapsulant has been used in similar projects with success and is approved for use by the EPA. The encapsulant will be applied directly onto the painted surface and will cover the full extent of the specified painted surfaces.
- Upon completion of the application of epoxy coating, EH&E will conduct a visual inspection as well as confirmatory wipe sampling on top of the cured epoxy to verify the completeness of the cleaning and encapsulation effort.
- Surfaces with wipe sample analytical results above the EPA approved limit will be resealed by applying an additional layer of encapsulant.

10.0 ABATEMENT COMPLETION ACCEPTANCE CRITERIA

As part of the abatement process, inspections and tests will be conducted to verify the completion of the work specified herein.

10.1 VISUAL INSPECTION CRITERIA

Upon completion of the work, EH&E will inspect areas and surfaces for visible evidence of dust or debris and inspect for the presence of any PCB source material. All areas where abatement activities have occurred shall be inspected. Additional inspections of various systems or surfaces will be conducted as the cleaning and decontamination is completed if, at the discretion of EH&E, recontamination of the surface by ongoing work is likely. Visual inspection will be used as a preliminary verification that abatement has been completed, but will not replace sampling of materials and surfaces.

The acceptance criterion is that all surfaces that require cleaning or decontamination, including protective sheeting and tarps, shall be free of visible dust and debris. In addition, no PCB material specified for removal shall remain in place.

10.2 PCB SAMPLING CRITERIA

For epoxy encapsulant, the wipe sample acceptance criterion will be less than or equal to $1.0 \mu\text{g}/100 \text{ cm}^2$ for total PCBs. Surface wipe samples will be collected from the exposed surface of the final epoxy or tape barrier. If the surface wipes are reported with PCBs $<1.0 \mu\text{g}/100 \text{ cm}^2$, the coating application will be considered complete; if the samples are reported with PCBs $>1.0 \mu\text{g}/100 \text{ cm}^2$, another layer of the coating will be applied over all the areas represented by those samples and the sampling process will be repeated for those areas failing the acceptance criteria.

10.3 SAMPLING

10.3.1 Sampling Plan

In order to measure the success of the abatement process, EH&E will conduct random wipe sampling of abated surfaces during the abatement process. The frequency and

number of random samples shall be determined by the linear footage of caulk and square footage of paint.

EH&E will collect wipe samples at a minimum of one vertical caulk bead for every 5 beads abated; for an estimated total of 25 samples. In addition, EH&E will sample a minimum of 1 sample for every 100 square feet of painted surface.

Table 10.1 provides a summary estimate of the areas that require abatement and the associated wipe samples that will be collected.

Table 10.1 Wipe Sampling Plan, Field Elementary School, Weston Massachusetts		
Types of Surfaces	Estimated Total Number of Units	Wipe Samples (as applicable)
Epoxy encapsulant on caulk joints	150 vertical caulk joints	25 samples
Epoxy encapsulant on paint	2,550 SF	26 samples
SF square feet		

10.3.2 Sample Collection

EH&E will collect wipe samples from the exposed surface of the newly applied epoxy sealant. Each sample shall include a measured wipe sample; a nominal area of 100 cm² will be wiped for each area. Results will be reported in micrograms of total PCBs per 100 cm². Hexane moistened gauze pads will be used to wipe the surfaces. The samples will be analyzed by Alpha Analytical, Inc. following EPA Method 8082.

10.3.3 Contingency Sampling

In the event that the sampling results are greater than the specified acceptance criteria, additional abatement procedures shall be conducted. Following additional encapsulation, confirmatory sampling of the re-abated areas and/or surfaces shall be conducted. Additional abatement procedures include, but are not limited to, additional cleaning of surfaces with solvents and reapplication of sealants.

10.4 AIR MONITORING

Subsequent to completion of caulk removal and encapsulation of specified areas and prior to occupancy by students, EH&E will collect a follow-up round of air samples for analysis of PCB homologs via EPA Methods 3540C and 680/8270C (SIM(M)). Samples will be collected from representative locations throughout the School during hours of typical occupancy. The purpose of this testing is to provide a second baseline for post-abatement airborne PCB concentrations in the School, and to ensure that removal efforts do not generate concentrations of PCBs in air that exceed the EPA-recommended limit of 300 ng/m³.

If concentrations during this test event exceed 300 ng/m³, EH&E will work with the Town to implement ventilation improvements and other strategies to achieve acceptable concentrations in the School.

10.5 QUALITY ASSURANCE/QUALITY CONTROL

This section describes the quality assurance objectives, measurement criteria, and performance criteria that will be employed for this program. The selected analytical test methods for this project will have laboratory quantification limits that are lower than the established project action limits.

The ultimate objective of this project is to remove PCB source materials, clean contaminated surfaces of PCB residues, and encapsulate materials as specified in this plan. The data collected must be of sound quality to support a determination that sources have been removed and surfaces cleaned to meet the acceptance criteria.

The ability of the data to meet the project quality objectives shall be measured using data quality criteria, which include precision, accuracy, representativeness, comparability, completeness, and sensitivity parameters. Laboratory and field sampling activity documentation will be used to assess these parameters. In addition, only certified laboratories shall be used to ensure proper data handling techniques. The acceptance criteria and frequency of measurement of these parameters are summarized in Table 10.2.

Table 10.2 Quality Assurance and Control by Media			
Data Quality Indicators	Measurement Performance Criteria	QC Sample and/or Activity Used to Assess Measurement Performance	Frequency
Bulk Samples			
Precision—overall	±45%	Field duplicates	Minimum: One per group or 10% of samples
Precision—laboratory	±45%	1. Matrix Spike 2. Matrix Spike Duplicates	Minimum: One per analysis.
Accuracy/bias	±45%	1. Matrix Spike 2. Matrix Spike Duplicates	Minimum: One per group or 5% of samples
Accuracy/bias	Acceptable quality control range based on analytical technique	Laboratory Control (PE) Samples	Double column GC Surrogate Compound
Accuracy/bias—contamination	No target analytes above laboratory quantification limit with the exception of common field/laboratory contaminants	1. Equipment blanks 2. Method blanks	Minimum: One per group
Comparability	Not applicable	Comparability check	Double column GC
Data completeness	90% Overall	Data completeness check	
Sensitivity	±100%	1. Laboratory fortified Blank 2. Low Calibration Standard	Minimum: One per group or 10% of samples
Air and Wipe Samples			
Precision—overall	±45%	Field duplicates	Minimum: One per group or 10% of samples
Accuracy/bias	Acceptable quality control range based on analytical technique	Laboratory Control (PE) Samples	Double column GC Surrogate Compound
Accuracy/bias—contamination	No target analytes above laboratory quantification limit with the exception of common field/laboratory contaminants	1. Equipment blanks 2. Method blanks	Minimum: One per group
Comparability	Not applicable	Comparability check	Double column GC
Data completeness	90% Overall	Data completeness check	
Sensitivity	±100%	1. Laboratory fortified Blank 2. Low Calibration Standard	Minimum: One per group or 10% of samples
QC quality control GC gas chromatography			

10.5.1 Precision

Precision is the degree of agreement among repeated measurements of the same characteristic under the same or similar conditions. In general, EH&E collects one duplicate sample for every ten samples collected or 10% of the sample size. No less

than one duplicate set will be collected, regardless of the sample size. The identity of the duplicate sample(s) is not revealed to the analytical laboratory. The target precision among field duplicates is $\pm 45\%$, indicating good reproducibility. Because of the low possibility of residual PCBs in the collected samples, EH&E believes that a precision of 45% will be an acceptable indicator for reproducibility. Precision levels greater than 45% will not invalidate the sample data, but will be flagged to caution users about the variability within the data.

10.5.2 Accuracy

Accuracy is the extent of agreement between an observed value (sample result) and the accepted or true value of the parameter being measured. EH&E employs proper quality control techniques, including the submittal of two field blanks or 10% of the sample number, whichever one is greater. EH&E also observes proper handling and packaging techniques to preserve the integrity of the samples. Where appropriate, EH&E will use pre-spiked samples prepared by the laboratory to document the integrity of the sampling and analytical process. The appropriate laboratory quality control program and analytical method determine acceptable recoveries. The laboratory will utilize spiked samples, reference standards, and blanks to assure accuracy. Recoveries outside the acceptable limits will not invalidate the sample data set; however, the data will be flagged to warn of its reliability.

10.5.3 Representativeness

Representativeness is a qualitative term that describes the extent to which a sampling design adequately reflects the environmental conditions of a site. The samples will be selected to represent the various field conditions and the types of areas that will be remediated.

10.5.4 Reasonableness

All data will be evaluated for reasonableness based on existing knowledge of the Aroclor mixtures in the building environment and on pre-abatement levels. In addition, levels published in the scientific literature will be consulted to evaluate the data both before and

after the remediation. Any data that substantially falls outside these expected levels will be further evaluated for accuracy and additional data collection may be required.

10.5.5 Completeness

Completeness is a measure (percentage) of the amount of valid data obtained meeting the data quality objectives. Valid data are data that are soundly founded as evidenced by the data quality indicators. The acceptable completeness percentage for this project is 90%.

11.0 SITE RESTORATION

Upon successful completion of the work, including meeting the acceptance criteria specified in Section 13, the School shall be restored to a condition that is suitable to the Town prior to the completion date of August 20, 2012. The condition will include

- Removal of all abatement materials.
- Removal of containers and off-site disposal of all waste.
- Application of epoxy sealant.

12.0 HEALTH AND SAFETY

12.1 CONTRACTOR HEALTH AND SAFETY PLAN

The abatement contractor must submit a written health and safety plan that details engineering controls, practices and procedures, protective equipment, and training that will be used to control and minimize exposures. In addition, the plan will include provisions for all relevant health and safety issues. This plan must be submitted with the bid proposal and will be considered in the bid selection process.

The safety plan shall include copies of training materials and training records for those who will be working on-site at any time during the remediation project. If new employees are hired during the course of the work, they must receive training prior to beginning work and evidence of this training must be provided to Town's project manager and environmental consultant.

12.2 OSHA REGULATIONS

All applicable federal and state OSHA standards and regulations to ensure worker safety will be in effect during the abatement process. The following programs must be addressed in the contractor's health and safety plan. This is not a comprehensive list of the required programs, and the contractor is responsible for determining which programs apply and how best to implement the required programs.

- Fall Protection
- Personal Protective Equipment
- Lockout/Tagout
- Confined Spaces
- Machine Safety
- Ladder/Scaffolding Safety
- Electrical Safety
- Housekeeping (slips, trips, falls)
- Injury Reporting
- First Aid

- HAZWOPER

12.3 PUBLIC SAFETY

The work will take place in the interior of the building. The contractor, in conjunction with the Town will need to ensure public safety during the abatement work. The contractor will need to implement containment measures designed to protect workers, occupants, and the environment from the release of PCB-containing materials. Containment will include, but not be limited to, draping work areas, the use of HEPA filters to collect fugitive emissions during the cutting operations, isolation of work areas from occupied areas, blocking off windows and air-conditioning units, and protective wind screens.

Access to work areas will need to be limited to ensure that only workers aware of the abatement project will be within the Site. Proper hygiene and decontamination procedures must be followed to limit the potential for transferring PCB remediation waste outside the work areas.

During the remediation work, EH&E will conduct visual assessments to verify the effectiveness of the containment controls of the abatement contractor. If observations indicate that additional containment or engineering controls are required, the abatement contractor will be responsible for making the necessary adjustments to engineering controls and work practices to minimize fugitive emissions, as determined by the Town's environmental consultant. In addition, if there is evidence of PCB bulk product waste or remediation waste outside of the immediate work area (as determined by visual inspection by EH&E), the abatement contractor shall be responsible for cleaning up the dust/debris in accordance with the procedures and to the standards specified in this document, and shall modify controls and procedures to prevent a reoccurrence, at no cost to the Town.

13.0 FINAL APPROVAL AND ACCEPTANCE

Final approval of the remedial work will be given when the following conditions are met:

- The work has been completed in a professionally competent manner, as demonstrated by successful inspections described in Section 10.
- The results of all testing meet the standards specified in Section 10.
- The Site has been successfully restored to its original condition as specified in Section 11.
- The Town will receive a completed and accurate waste manifest for every PCB waste container removed from the building's waste storage location.

Approval of the abatement and remediation will be given by EH&E in consultation with the Town's project manager.

14.0 REFERENCES

EPA 40 CFR 761. Polychlorinated biphenyls (PCBs) manufacturing, processing, distribution in commerce, and use prohibitions. *Code of Federal Regulations*, Title 40, Part 761. Washington, DC: U.S. Environmental Protection Agency.

EPA. 1997. *Draft Standard Operating Procedures for Sampling Concrete in the Field*. Washington, DC: U.S. Environmental Protection Agency

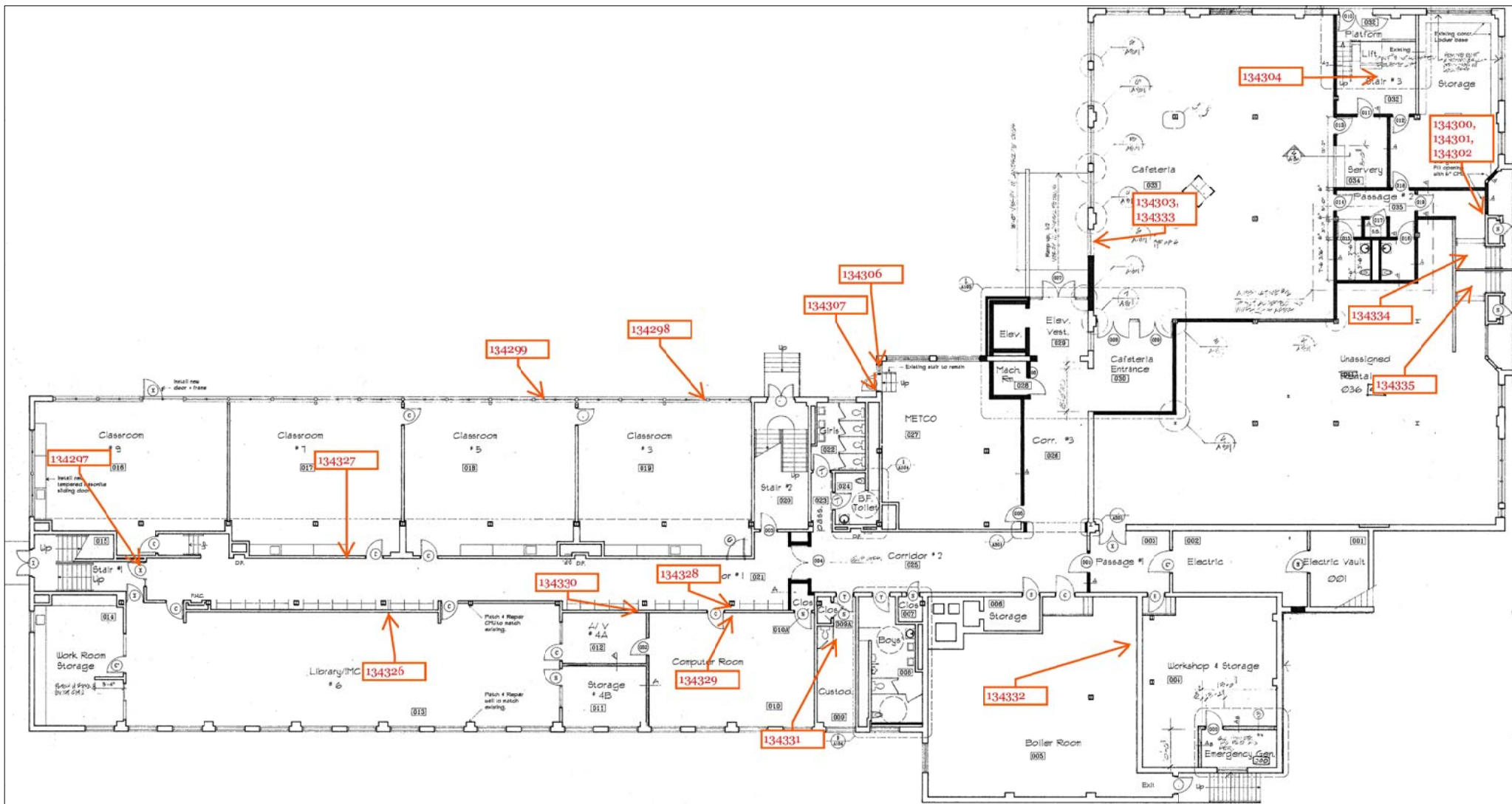
EPA. 2012. Public Health Levels for PCBs in Indoor School Air. *polychlorinated biphenyls (PCBs)*. U.S. Environmental Protection Agency 2012.

MacIntosh DL, Minegishi T, Fragala MA, Allen JG, Coghlan KM, Stewart JH, and McCarthy JF. 2012. Mitigation of building-related polychlorinated biphenyls in indoor air of a school. *Environmental Health*. 2012.

OSHA 29 CFR 1926.59. Safety and Health Regulations for Construction. *Code of Federal Regulations*. Title 29, Part 1926, Section 59, Hazard Communication. Washington, DC: U.S. Occupational Safety and Health Administration.

APPENDIX A

FIGURES



- NOTES**
1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
 2. BASED ON EH&E'S ASSESSMENT ON JUNE 6, 2012.

TITLE:
Ground Floor Bulk Sample Locations

CLIENT:
Jonathan Levi Architects

LOCATION:
**Ground Floor
Field Elementary School
Weston, MA**

FIGURE ID:
A.1

DATE:
June 6, 2012

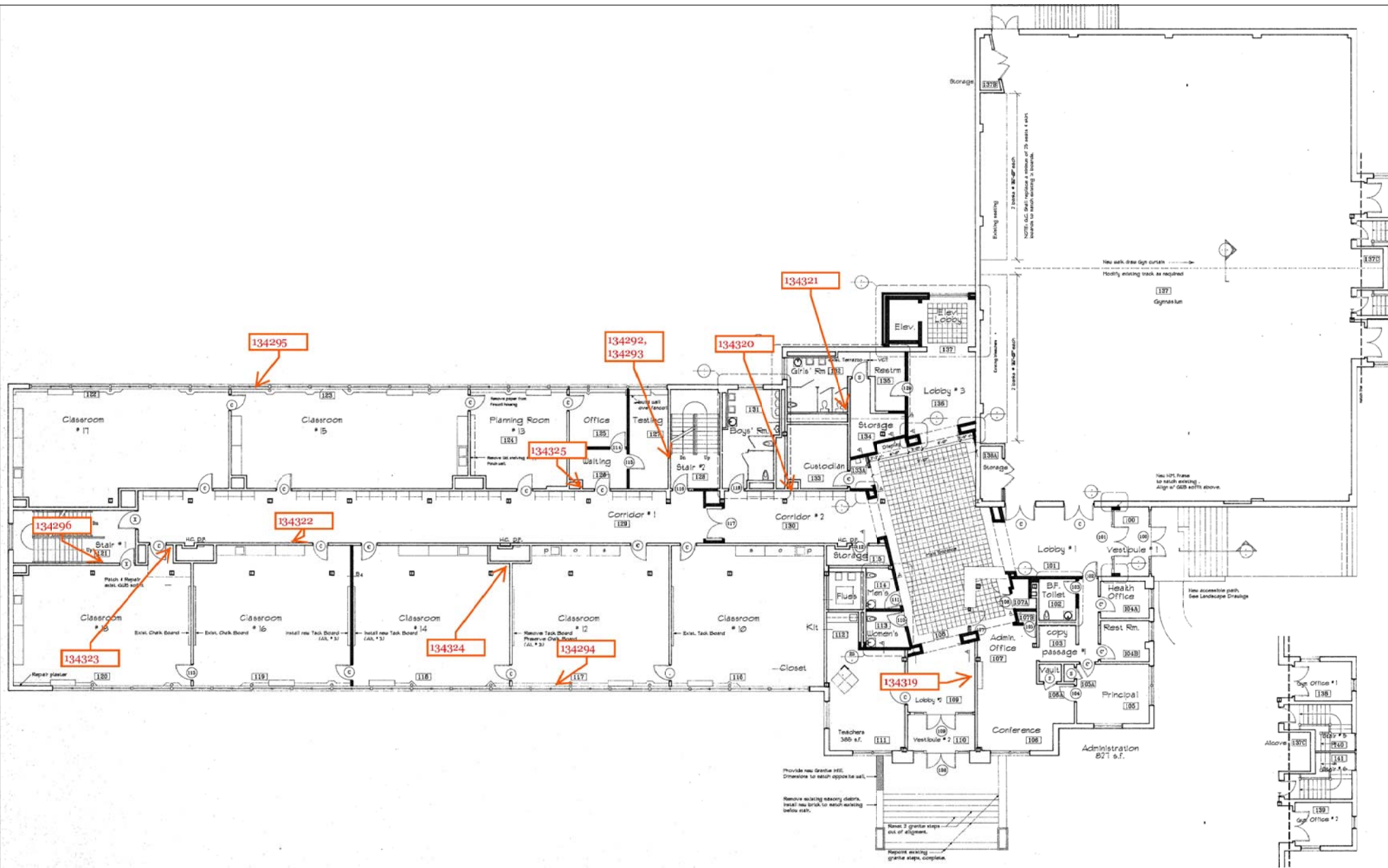
CREATED:
ASB/TQT

PROJECT:
17515

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TITLE:
First Floor Bulk Sample Locations

FIGURE ID:
A.2

CLIENT:
Jonathan Levi Architects

DATE:
June 6, 2012

LOCATION:
First Floor
Field Elementary School
Weston, MA

CREATED:
ASB/TQT

PROJECT:
17515

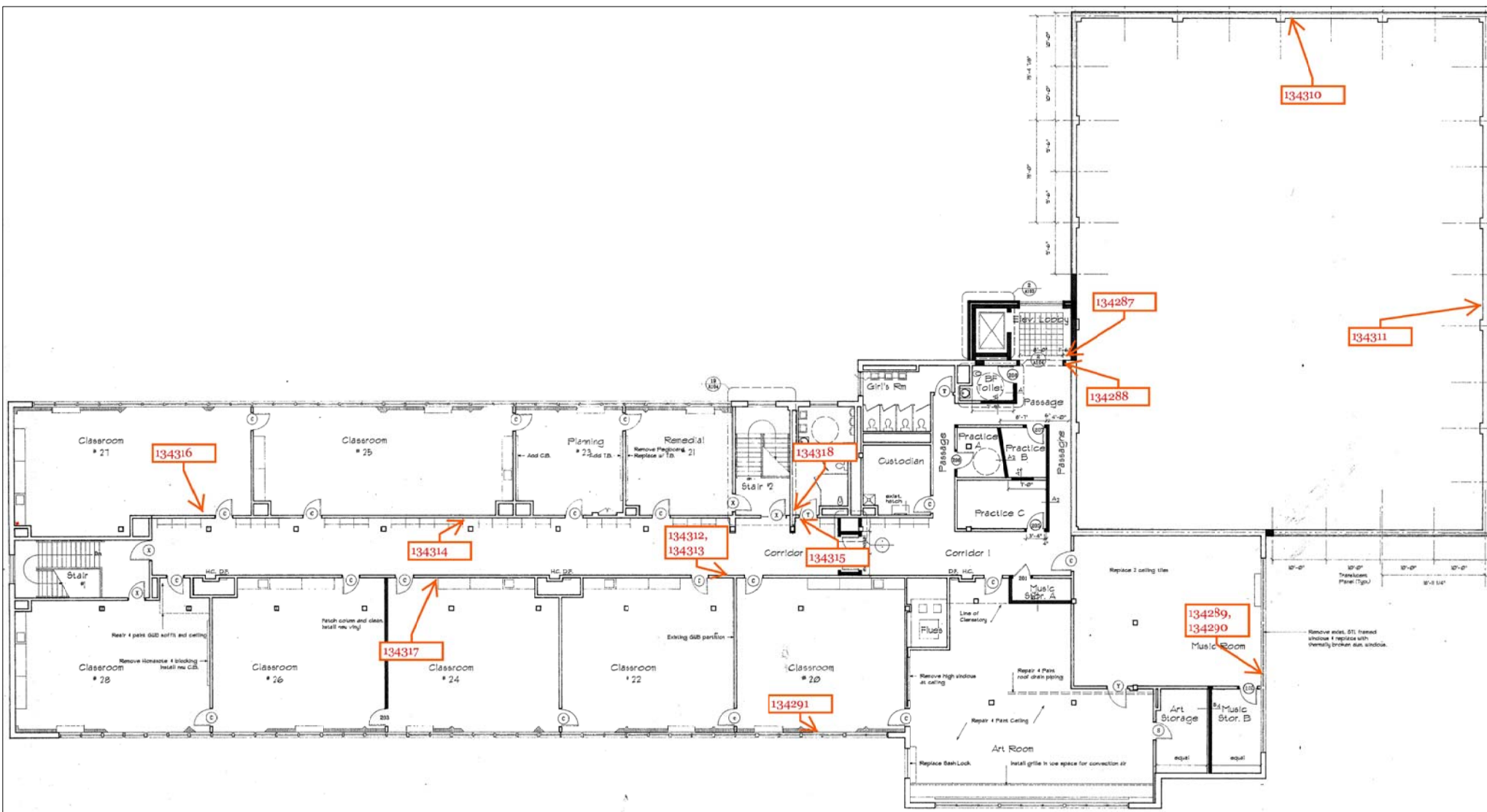
PAGE 1 OF 1

NOTES

1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASED ON EH&E'S ASSESSMENT ON JUNE 6, 2012.



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NOTES

1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASED ON EH&E'S ASSESSMENT ON JUNE 6, 2012.

TITLE:
Second Floor Bulk Sample Locations

CLIENT:
Jonathan Levi Architects

LOCATION:
**Second Floor
Field Elementary School
Weston, MA**

FIGURE ID:
A.3

DATE:
June 6, 2012

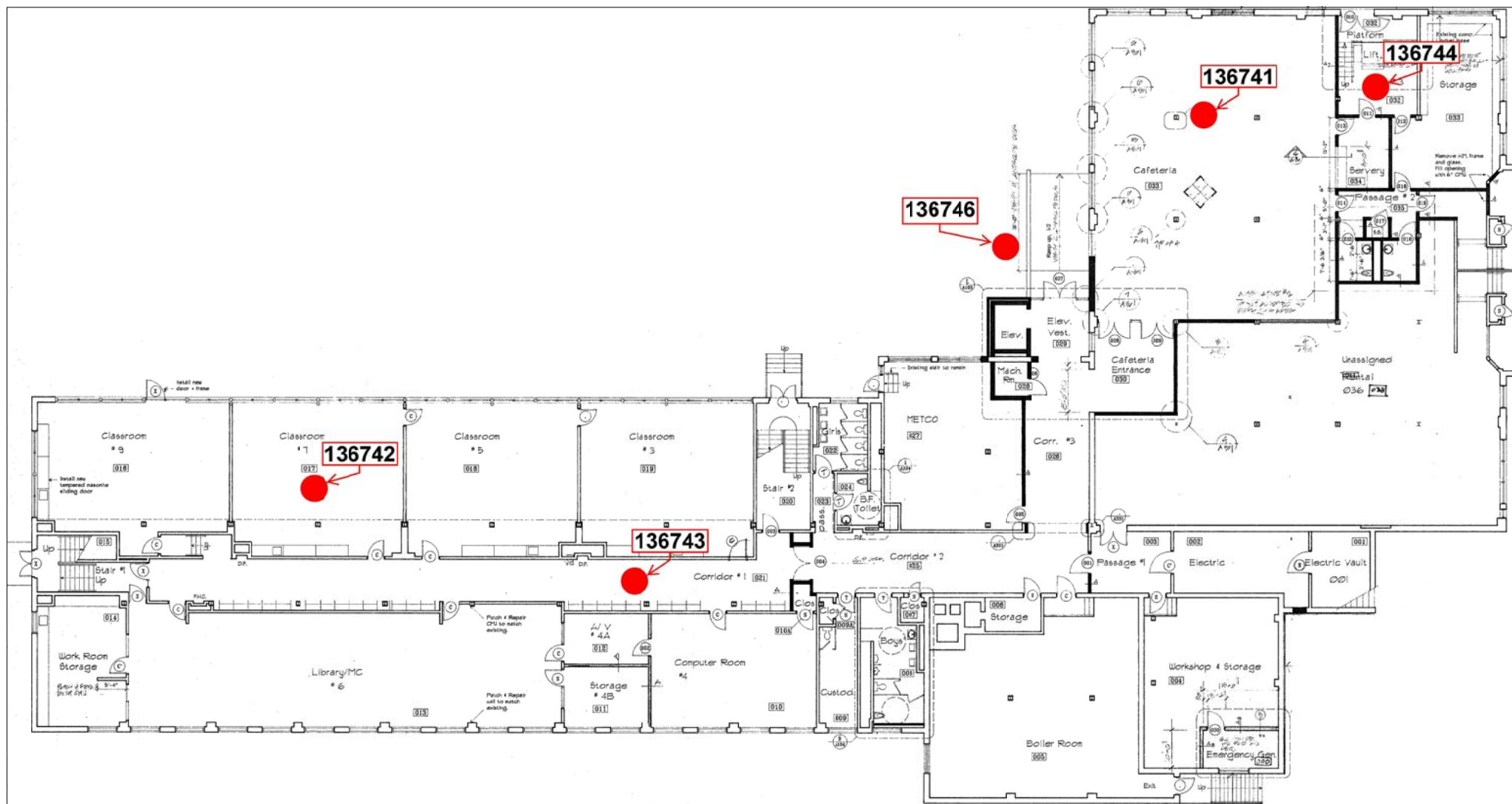
CREATED:
ASB/TQT

PROJECT:
17515

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NOTES

1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASED ON EH&E'S ASSESSMENT ON JULY 11, 2012.

TITLE:
Ground Floor Air Sampling Locations

CLIENT:
Jonathan Levi Architects

LOCATION:
**Ground Floor
Field Elementary School
Weston, MA**

FIGURE ID:
A.4

DATE:
July 11, 2012

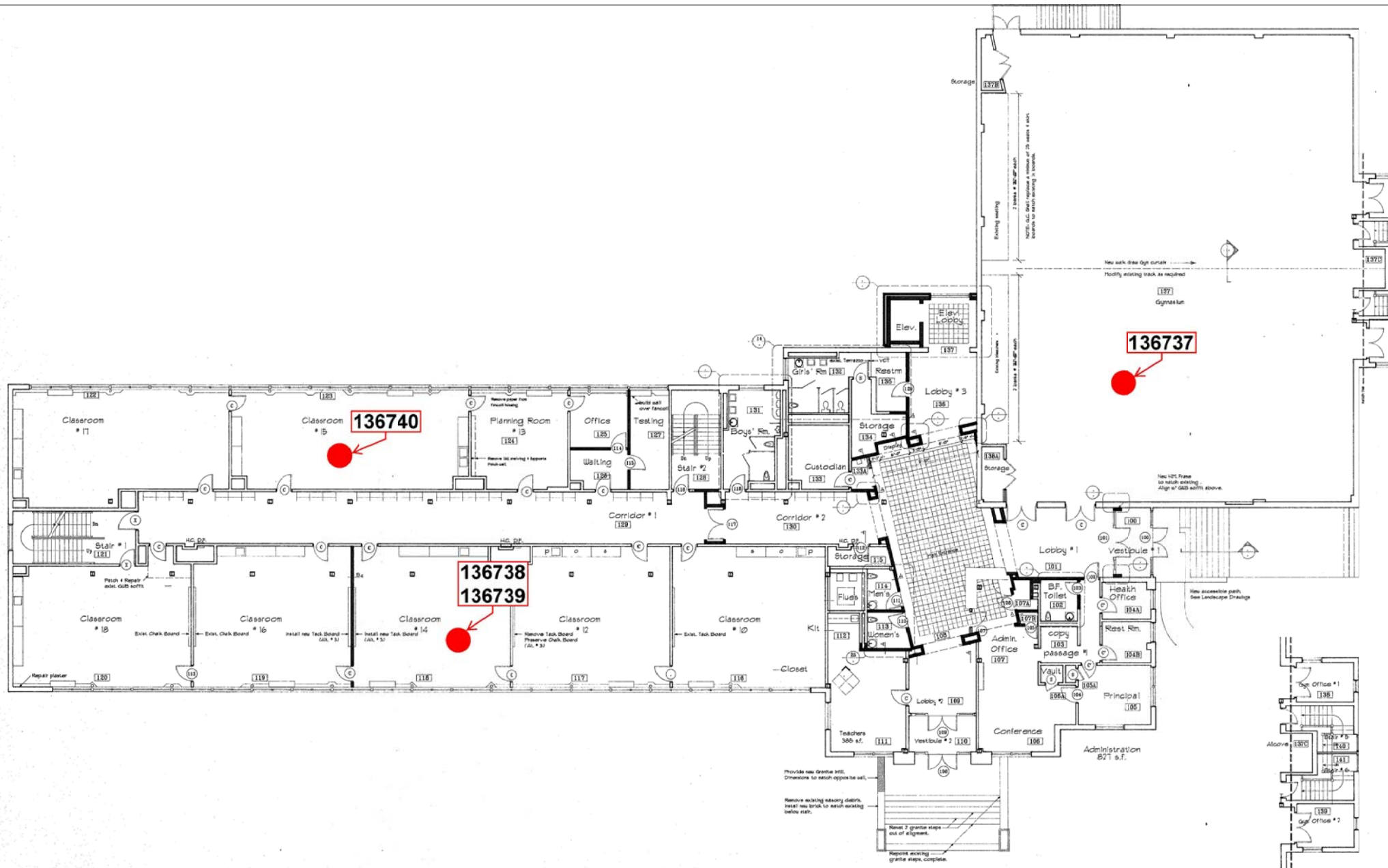
CREATED:
TQT

PROJECT:
17515

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NOTES

1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASED ON EH&E'S ASSESSMENT ON JULY 11, 2012.

TITLE:
First Floor Air Sampling Locations

CLIENT:
Jonathan Levi Architects

LOCATION:
First Floor
Field Elementary School
Weston, MA

FIGURE ID:
A.5

DATE:
July 11, 2012

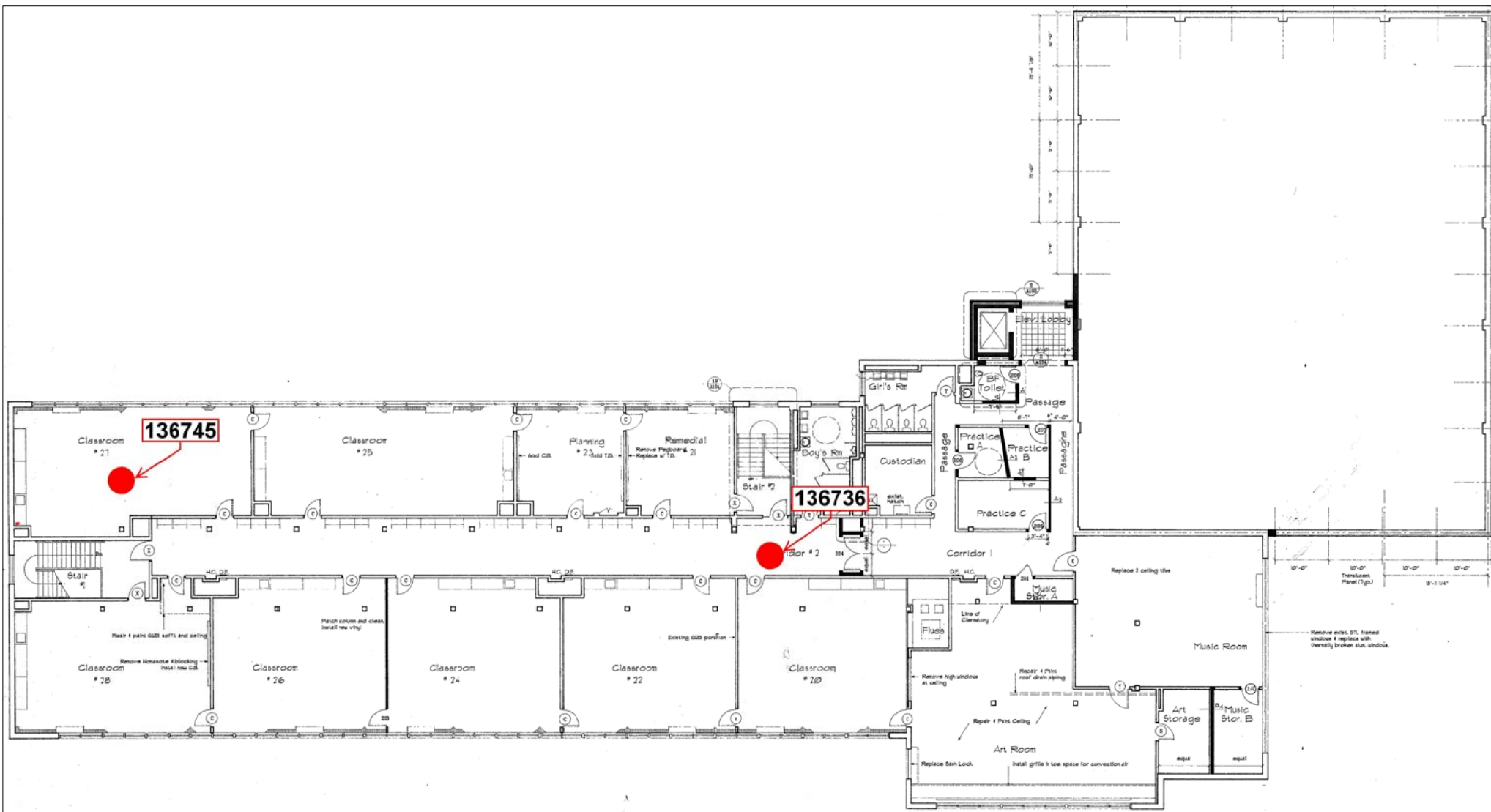
CREATED:
TQT

PROJECT:
17515

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NOTES

1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASED ON EH&E'S ASSESSMENT ON JULY 11, 2012.

TITLE:
Second Floor Air Sampling Locations

CLIENT:
Jonathan Levi Architects

LOCATION:
**Second Floor
Field Elementary School
Weston, MA**

FIGURE ID:
A.6

DATE:
July 11, 2012

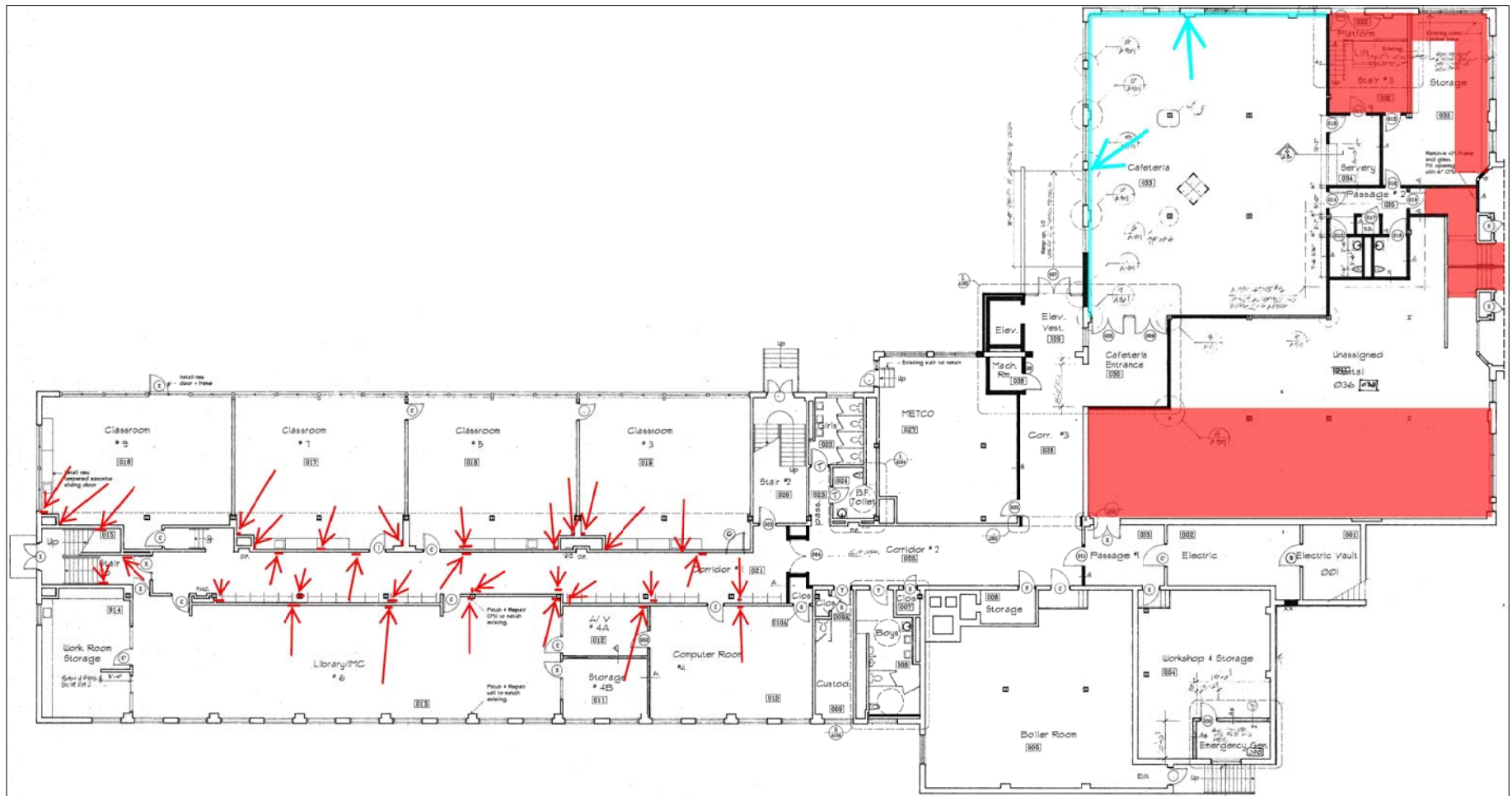
CREATED:
TQT

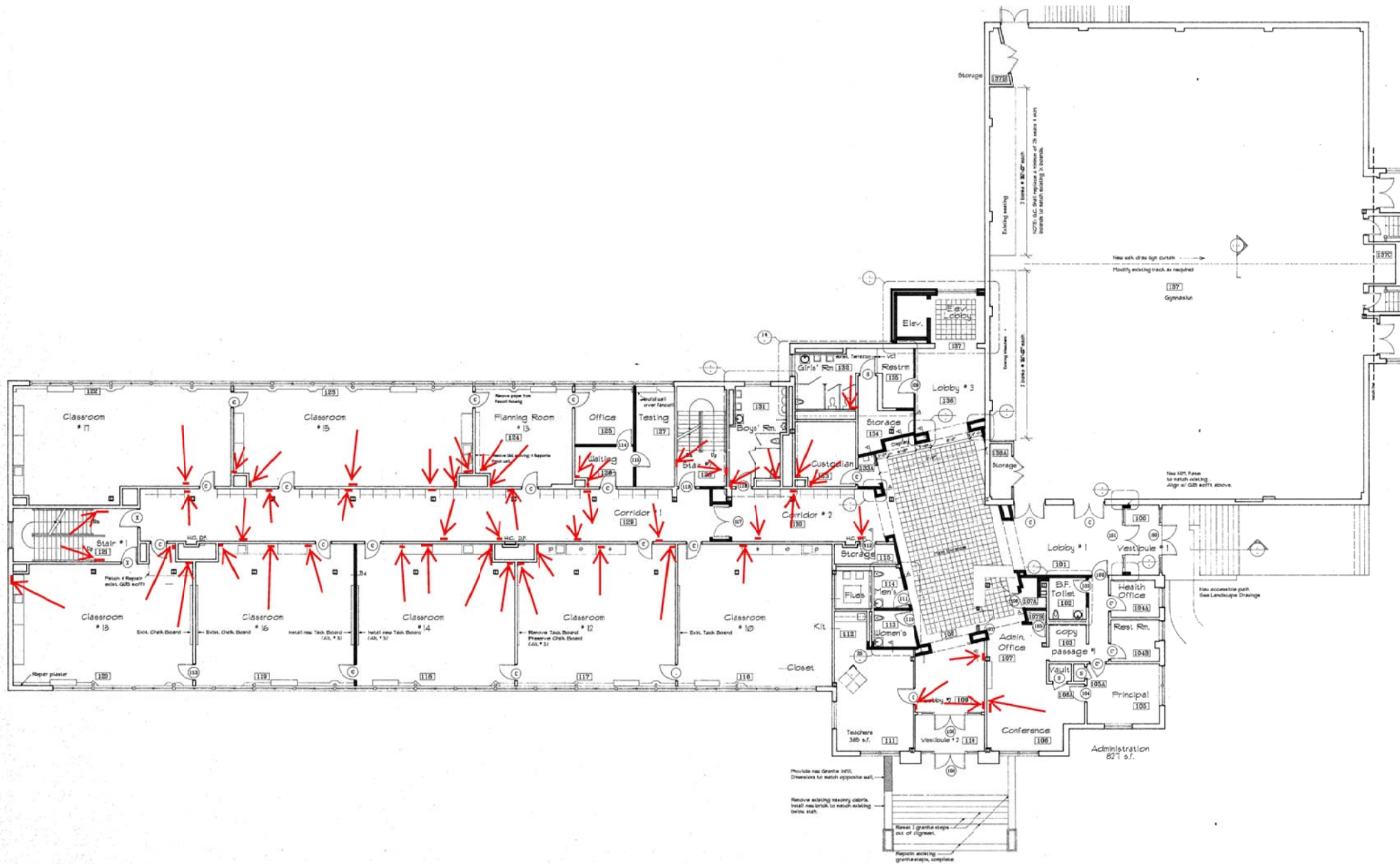
PROJECT:
17515

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Observed PCB Caulk Joint

NOTES

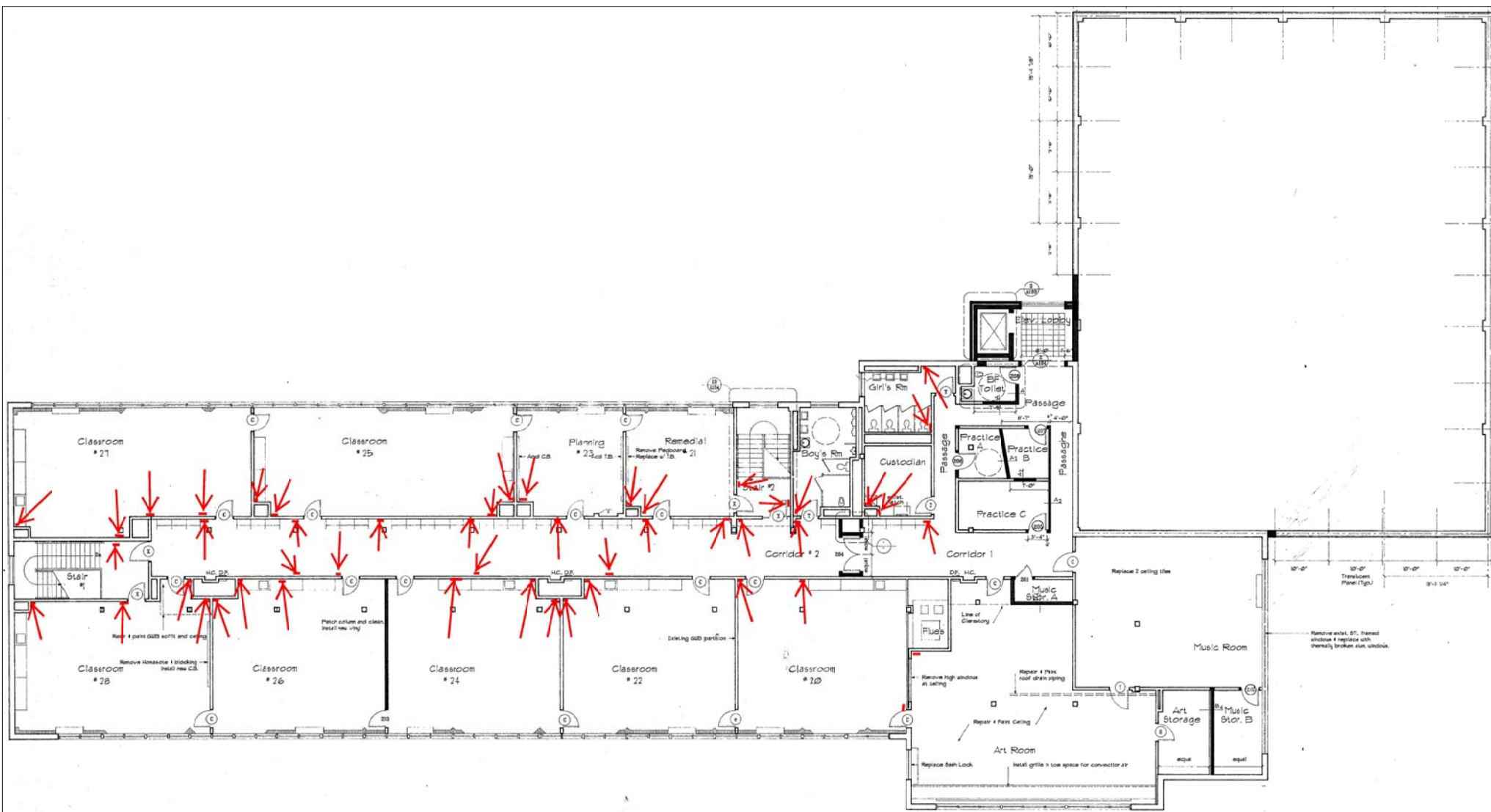
1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASED ON EH&E'S ASSESSMENT ON JUNE 20, 2012.

TITLE:	First Floor Observed Caulk Joint Locations
CLIENT:	Jonathan Levi Architects
LOCATION:	First Floor Field Elementary School Weston, MA

FIGURE ID:	A.8
DATE:	June 20, 2012
CREATED:	ASB/TQT
PROJECT:	17515
PAGE 1 OF 1	



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— Observed PCB Caulk Joint

NOTES

1. LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. BASED ON EH&E'S ASSESSMENT ON JUNE 20, 2012.

TITLE: **Second Floor Observed Caulk Joint Locations**

CLIENT: **Jonathan Levi Architects**

LOCATION: **Second Floor
Field Elementary School
Weston, MA**

FIGURE ID: **A.9**

DATE: **June 20, 2012**

CREATED: **ASB/TQT**

PROJECT: **17515**

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APPENDIX B

LABORATORY REPORTS



ANALYTICAL REPORT

Lab Number:	L1210111
Client:	Environmental Health & Engineering Inc. 117 Fourth Ave Needham, MA 02494
ATTN:	Cynthia Campisano
Phone:	(781) 247-4300
Project Name:	17515 PHASE II
Project Number:	17515 PHASE II
Report Date:	06/14/12

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: 17515 PHASE II
Project Number: 17515 PHASE II

Lab Number: L1210111
Report Date: 06/14/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1210111-01	134273	Not Specified	06/06/12 12:00
L1210111-02	134274	Not Specified	06/06/12 12:15
L1210111-03	134275	Not Specified	06/06/12 12:15
L1210111-04	134276	Not Specified	06/06/12 12:15
L1210111-05	134277	Not Specified	06/06/12 12:25
L1210111-06	134278	Not Specified	06/06/12 12:25
L1210111-07	134279	Not Specified	06/06/12 12:30
L1210111-08	134280	Not Specified	06/06/12 12:30
L1210111-09	134281	Not Specified	06/06/12 12:35
L1210111-10	134282	Not Specified	06/06/12 12:35
L1210111-11	134283	Not Specified	06/06/12 12:35
L1210111-12	134284	Not Specified	06/06/12 12:35
L1210111-13	134285	Not Specified	06/06/12 12:40
L1210111-14	134286	Not Specified	06/06/12 12:40
L1210111-15	134287	Not Specified	06/06/12 14:20
L1210111-16	134288	Not Specified	06/06/12 14:20
L1210111-17	134292	Not Specified	06/06/12 14:35
L1210111-18	134293	Not Specified	06/06/12 14:40
L1210111-19	134294	Not Specified	06/06/12 14:40
L1210111-20	134295	Not Specified	06/06/12 14:45
L1210111-21	134296	Not Specified	06/06/12 14:45
L1210111-22	134297	Not Specified	06/06/12 15:05
L1210111-23	134298	Not Specified	06/06/12 15:05
L1210111-24	134299	Not Specified	06/06/12 15:10
L1210111-25	134300	Not Specified	06/06/12 15:10
L1210111-26	134301	Not Specified	06/06/12 15:10
L1210111-27	134302	Not Specified	06/06/12 15:10
L1210111-28	134303	Not Specified	06/06/12 15:20
L1210111-29	134304	Not Specified	06/06/12 15:20
L1210111-30	134305	Not Specified	06/06/12 15:35
L1210111-31	134306	Not Specified	06/06/12 15:45

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1210111-32	134307	Not Specified	06/06/12 15:45
L1210111-33	134289	Not Specified	06/06/12 14:25
L1210111-34	134290	Not Specified	06/06/12 14:25
L1210111-35	134291	Not Specified	06/06/12 14:35

Project Name: 17515 PHASE II
Project Number: 17515 PHASE II

Lab Number: L1210111
Report Date: 06/14/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: 17515 PHASE II
Project Number: 17515 PHASE II

Lab Number: L1210111
Report Date: 06/14/12

Case Narrative (continued)

PCBs

L1210111-01 through -04, -06, -07, -09 through -16, -19, -25, -26, -27, -30, -31 and -35 have elevated detection limits due to the dilutions required by the presence of non-target analytes.

The surrogate recoveries for L1210111-01, -06, -11 through -19, -21, -22, -25 through -29, -32, -33, -34 and -35 are below the acceptance criteria for 2,4,5,6-Tetrachloro-m-xylene and Decachlorobiphenyl (all 0%) due to the dilutions required to quantitate the samples. Re-extractions were not required; therefore, the results of the original analyses are reported.

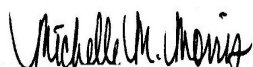
The WG540704-1 Method Blank, associated with L1210111-02, -03, -04, -07 through -14 and -17, has a concentration above the reporting limit for Aroclor 1254. Since all samples (except -17) were non-detect for this target analyte, no further actions were taken. L1210111-17 has a concentration greater than 10x the blank concentration; therefore, no qualification of the results was performed. The results of the original analysis are reported.

The WG540723-1 Method Blank, associated with L1210111-18, -21 through -24, -28 and -29, has a concentration above the reporting limit for Aroclor 1254. Since the associated sample concentrations are greater than 10x the blank concentration, no qualification of the results was performed.

The MS/MSD was not analyzed because the dilution required by the elevated concentrations of non-target compounds present in the sample to be utilized for the MS/MSD would have caused the spike compounds to be diluted below the range of calibration.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Michelle M. Morris

Title: Technical Director/Representative

Date: 06/14/12

ORGANICS

PCBS

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-01

Client ID: 134273

Sample Location: Not Specified

Matrix: Solid

Analytical Method: 1,8082

Analytical Date: 06/12/12 20:18

Analyst: BA

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:00

Date Received: 06/07/12

Field Prep: Not Specified

Extraction Method: EPA 3540C

Extraction Date: 06/11/12 18:05

Cleanup Method1: EPA 3665A

Cleanup Date1: 06/12/12

Cleanup Method2: EPA 3660B

Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1080	--	10
Aroclor 1221	ND		ug/kg	1080	--	10
Aroclor 1232	ND		ug/kg	1080	--	10
Aroclor 1242	ND		ug/kg	1080	--	10
Aroclor 1248	ND		ug/kg	717	--	10
Aroclor 1254	ND		ug/kg	1080	--	10
Aroclor 1260	ND		ug/kg	717	--	10
Aroclor 1262	ND		ug/kg	358	--	10
Aroclor 1268	ND		ug/kg	358	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-02

Client ID: 134274

Sample Location: Not Specified

Matrix: Solid

Analytical Method: 1,8082

Analytical Date: 06/10/12 14:18

Analyst: BA

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:15

Date Received: 06/07/12

Field Prep: Not Specified

Extraction Method: EPA 3540C

Extraction Date: 06/07/12 18:00

Cleanup Method1: EPA 3665A

Cleanup Date1: 06/09/12

Cleanup Method2: EPA 3660B

Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	484	--	4
Aroclor 1221	ND		ug/kg	484	--	4
Aroclor 1232	ND		ug/kg	484	--	4
Aroclor 1242	ND		ug/kg	484	--	4
Aroclor 1248	ND		ug/kg	322	--	4
Aroclor 1254	ND		ug/kg	484	--	4
Aroclor 1260	ND		ug/kg	322	--	4
Aroclor 1262	ND		ug/kg	161	--	4
Aroclor 1268	ND		ug/kg	161	--	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	66		30-150
Decachlorobiphenyl	66		30-150
2,4,5,6-Tetrachloro-m-xylene	81		30-150
Decachlorobiphenyl	85		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-03

Client ID: 134275

Sample Location: Not Specified

Matrix: Solid

Analytical Method: 1,8082

Analytical Date: 06/10/12 14:31

Analyst: BA

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:15

Date Received: 06/07/12

Field Prep: Not Specified

Extraction Method: EPA 3540C

Extraction Date: 06/07/12 18:00

Cleanup Method1: EPA 3665A

Cleanup Date1: 06/09/12

Cleanup Method2: EPA 3660B

Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	574	--	4
Aroclor 1221	ND		ug/kg	574	--	4
Aroclor 1232	ND		ug/kg	574	--	4
Aroclor 1242	ND		ug/kg	574	--	4
Aroclor 1248	ND		ug/kg	383	--	4
Aroclor 1254	ND		ug/kg	574	--	4
Aroclor 1260	ND		ug/kg	383	--	4
Aroclor 1262	ND		ug/kg	191	--	4
Aroclor 1268	ND		ug/kg	191	--	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	37		30-150
Decachlorobiphenyl	33		30-150
2,4,5,6-Tetrachloro-m-xylene	48		30-150
Decachlorobiphenyl	47		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-04

Client ID: 134276

Sample Location: Not Specified

Matrix: Solid

Analytical Method: 1,8082

Analytical Date: 06/10/12 14:45

Analyst: BA

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:15

Date Received: 06/07/12

Field Prep: Not Specified

Extraction Method: EPA 3540C

Extraction Date: 06/07/12 18:00

Cleanup Method1: EPA 3665A

Cleanup Date1: 06/09/12

Cleanup Method2: EPA 3660B

Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	522	--	4
Aroclor 1221	ND		ug/kg	522	--	4
Aroclor 1232	ND		ug/kg	522	--	4
Aroclor 1242	ND		ug/kg	522	--	4
Aroclor 1248	ND		ug/kg	348	--	4
Aroclor 1254	ND		ug/kg	522	--	4
Aroclor 1260	ND		ug/kg	348	--	4
Aroclor 1262	ND		ug/kg	174	--	4
Aroclor 1268	ND		ug/kg	174	--	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	49		30-150
Decachlorobiphenyl	49		30-150
2,4,5,6-Tetrachloro-m-xylene	60		30-150
Decachlorobiphenyl	61		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-05 D
 Client ID: 134277
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 08:27
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:25
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/11/12 18:05
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/12/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	620	--	5
Aroclor 1221	ND		ug/kg	620	--	5
Aroclor 1232	ND		ug/kg	620	--	5
Aroclor 1242	ND		ug/kg	620	--	5
Aroclor 1248	ND		ug/kg	413	--	5
Aroclor 1260	ND		ug/kg	413	--	5
Aroclor 1262	ND		ug/kg	207	--	5
Aroclor 1268	ND		ug/kg	207	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	49		30-150
Decachlorobiphenyl	44		30-150
2,4,5,6-Tetrachloro-m-xylene	45		30-150
Decachlorobiphenyl	46		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-05 D
 Client ID: 134277
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 08:27
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:25
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/11/12 18:05
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/12/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	5900		ug/kg	620	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	49		30-150
Decachlorobiphenyl	44		30-150
2,4,5,6-Tetrachloro-m-xylene	45		30-150
Decachlorobiphenyl	46		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-06 D
 Client ID: 134278
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 08:44
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:25
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/11/12 18:05
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/12/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2010	--	15
Aroclor 1221	ND		ug/kg	2010	--	15
Aroclor 1232	ND		ug/kg	2010	--	15
Aroclor 1242	ND		ug/kg	2010	--	15
Aroclor 1248	ND		ug/kg	1340	--	15
Aroclor 1254	ND		ug/kg	2010	--	15
Aroclor 1260	ND		ug/kg	1340	--	15
Aroclor 1262	ND		ug/kg	670	--	15
Aroclor 1268	ND		ug/kg	670	--	15

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-07

Client ID: 134279

Sample Location: Not Specified

Matrix: Solid

Analytical Method: 1,8082

Analytical Date: 06/10/12 15:25

Analyst: BA

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:30

Date Received: 06/07/12

Field Prep: Not Specified

Extraction Method: EPA 3540C

Extraction Date: 06/07/12 18:00

Cleanup Method1: EPA 3665A

Cleanup Date1: 06/09/12

Cleanup Method2: EPA 3660B

Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	213	--	2
Aroclor 1221	ND		ug/kg	213	--	2
Aroclor 1232	ND		ug/kg	213	--	2
Aroclor 1242	ND		ug/kg	213	--	2
Aroclor 1248	ND		ug/kg	142	--	2
Aroclor 1254	ND		ug/kg	213	--	2
Aroclor 1260	ND		ug/kg	142	--	2
Aroclor 1262	ND		ug/kg	70.9	--	2
Aroclor 1268	ND		ug/kg	70.9	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	54		30-150
Decachlorobiphenyl	124		30-150
2,4,5,6-Tetrachloro-m-xylene	69		30-150
Decachlorobiphenyl	52		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-08

Client ID: 134280

Sample Location: Not Specified

Matrix: Solid

Analytical Method: 1,8082

Analytical Date: 06/10/12 15:38

Analyst: BA

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:30

Date Received: 06/07/12

Field Prep: Not Specified

Extraction Method: EPA 3540C

Extraction Date: 06/07/12 18:00

Cleanup Method1: EPA 3665A

Cleanup Date1: 06/09/12

Cleanup Method2: EPA 3660B

Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	112	--	1
Aroclor 1221	ND		ug/kg	112	--	1
Aroclor 1232	ND		ug/kg	112	--	1
Aroclor 1242	ND		ug/kg	112	--	1
Aroclor 1248	ND		ug/kg	74.6	--	1
Aroclor 1254	ND		ug/kg	112	--	1
Aroclor 1260	ND		ug/kg	74.6	--	1
Aroclor 1262	ND		ug/kg	37.3	--	1
Aroclor 1268	ND		ug/kg	37.3	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	55		30-150
Decachlorobiphenyl	48		30-150
2,4,5,6-Tetrachloro-m-xylene	62		30-150
Decachlorobiphenyl	68		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-09

Client ID: 134281

Sample Location: Not Specified

Matrix: Solid

Analytical Method: 1,8082

Analytical Date: 06/10/12 15:51

Analyst: BA

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:35

Date Received: 06/07/12

Field Prep: Not Specified

Extraction Method: EPA 3540C

Extraction Date: 06/07/12 18:00

Cleanup Method1: EPA 3665A

Cleanup Date1: 06/09/12

Cleanup Method2: EPA 3660B

Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	612	--	5
Aroclor 1221	ND		ug/kg	612	--	5
Aroclor 1232	ND		ug/kg	612	--	5
Aroclor 1242	ND		ug/kg	612	--	5
Aroclor 1248	ND		ug/kg	408	--	5
Aroclor 1254	ND		ug/kg	612	--	5
Aroclor 1260	ND		ug/kg	408	--	5
Aroclor 1262	ND		ug/kg	204	--	5
Aroclor 1268	ND		ug/kg	204	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	46		30-150
Decachlorobiphenyl	43		30-150
2,4,5,6-Tetrachloro-m-xylene	54		30-150
Decachlorobiphenyl	52		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-10

Client ID: 134282

Sample Location: Not Specified

Matrix: Solid

Analytical Method: 1,8082

Analytical Date: 06/10/12 16:04

Analyst: BA

Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:35

Date Received: 06/07/12

Field Prep: Not Specified

Extraction Method: EPA 3540C

Extraction Date: 06/07/12 18:00

Cleanup Method1: EPA 3665A

Cleanup Date1: 06/09/12

Cleanup Method2: EPA 3660B

Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	402	--	3
Aroclor 1221	ND		ug/kg	402	--	3
Aroclor 1232	ND		ug/kg	402	--	3
Aroclor 1242	ND		ug/kg	402	--	3
Aroclor 1248	ND		ug/kg	268	--	3
Aroclor 1254	ND		ug/kg	402	--	3
Aroclor 1260	ND		ug/kg	268	--	3
Aroclor 1262	ND		ug/kg	134	--	3
Aroclor 1268	ND		ug/kg	134	--	3

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	45		30-150
Decachlorobiphenyl	37		30-150
2,4,5,6-Tetrachloro-m-xylene	44		30-150
Decachlorobiphenyl	50		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-11 D
 Client ID: 134283
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 15:20
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:35
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/09/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	11600	--	100
Aroclor 1221	ND		ug/kg	11600	--	100
Aroclor 1232	ND		ug/kg	11600	--	100
Aroclor 1242	ND		ug/kg	11600	--	100
Aroclor 1248	ND		ug/kg	7750	--	100
Aroclor 1254	ND		ug/kg	11600	--	100
Aroclor 1260	ND		ug/kg	7750	--	100
Aroclor 1262	ND		ug/kg	3880	--	100
Aroclor 1268	ND		ug/kg	3880	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-12 D
 Client ID: 134284
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 15:32
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:35
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/09/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	12900	--	100
Aroclor 1221	ND		ug/kg	12900	--	100
Aroclor 1232	ND		ug/kg	12900	--	100
Aroclor 1242	ND		ug/kg	12900	--	100
Aroclor 1248	ND		ug/kg	8620	--	100
Aroclor 1254	ND		ug/kg	12900	--	100
Aroclor 1260	ND		ug/kg	8620	--	100
Aroclor 1262	ND		ug/kg	4310	--	100
Aroclor 1268	ND		ug/kg	4310	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-13 D
 Client ID: 134285
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 15:45
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:40
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/09/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	11700	--	100
Aroclor 1221	ND		ug/kg	11700	--	100
Aroclor 1232	ND		ug/kg	11700	--	100
Aroclor 1242	ND		ug/kg	11700	--	100
Aroclor 1248	ND		ug/kg	7810	--	100
Aroclor 1254	ND		ug/kg	11700	--	100
Aroclor 1260	ND		ug/kg	7810	--	100
Aroclor 1262	ND		ug/kg	3910	--	100
Aroclor 1268	ND		ug/kg	3910	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-14 **D**
Client ID: 134286
Sample Location: Not Specified
Matrix: Solid
Analytical Method: 1,8082
Analytical Date: 06/14/12 15:08
Analyst: BA
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 12:40
Date Received: 06/07/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 06/07/12 18:00
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/09/12
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1280	--	10
Aroclor 1221	ND		ug/kg	1280	--	10
Aroclor 1232	ND		ug/kg	1280	--	10
Aroclor 1242	ND		ug/kg	1280	--	10
Aroclor 1248	ND		ug/kg	851	--	10
Aroclor 1254	ND		ug/kg	1280	--	10
Aroclor 1260	ND		ug/kg	851	--	10
Aroclor 1262	ND		ug/kg	426	--	10
Aroclor 1268	ND		ug/kg	426	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-15 D
 Client ID: 134287
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 09:01
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:20
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/11/12 18:05
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/12/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	3360	--	25
Aroclor 1221	ND		ug/kg	3360	--	25
Aroclor 1232	ND		ug/kg	3360	--	25
Aroclor 1242	ND		ug/kg	3360	--	25
Aroclor 1248	ND		ug/kg	2240	--	25
Aroclor 1254	ND		ug/kg	3360	--	25
Aroclor 1260	ND		ug/kg	2240	--	25
Aroclor 1262	ND		ug/kg	1120	--	25
Aroclor 1268	ND		ug/kg	1120	--	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-16 D
 Client ID: 134288
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 09:19
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:20
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/11/12 18:05
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/12/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	6610	--	50
Aroclor 1221	ND		ug/kg	6610	--	50
Aroclor 1232	ND		ug/kg	6610	--	50
Aroclor 1242	ND		ug/kg	6610	--	50
Aroclor 1248	ND		ug/kg	4400	--	50
Aroclor 1254	ND		ug/kg	6610	--	50
Aroclor 1260	ND		ug/kg	4400	--	50
Aroclor 1262	ND		ug/kg	2200	--	50
Aroclor 1268	ND		ug/kg	2200	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-17 D
 Client ID: 134292
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 11:38
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:35
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/09/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1170000	--	10000
Aroclor 1221	ND		ug/kg	1170000	--	10000
Aroclor 1232	ND		ug/kg	1170000	--	10000
Aroclor 1242	ND		ug/kg	1170000	--	10000
Aroclor 1248	ND		ug/kg	778000	--	10000
Aroclor 1254	30400000		ug/kg	1170000	--	10000
Aroclor 1260	ND		ug/kg	778000	--	10000
Aroclor 1262	ND		ug/kg	389000	--	10000
Aroclor 1268	ND		ug/kg	389000	--	10000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-18 D
 Client ID: 134293
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 10:46
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:40
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:18
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2630000	--	25000
Aroclor 1221	ND		ug/kg	2630000	--	25000
Aroclor 1232	ND		ug/kg	2630000	--	25000
Aroclor 1242	ND		ug/kg	2630000	--	25000
Aroclor 1248	ND		ug/kg	1750000	--	25000
Aroclor 1260	ND		ug/kg	1750000	--	25000
Aroclor 1262	ND		ug/kg	877000	--	25000
Aroclor 1268	ND		ug/kg	877000	--	25000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-18 D
 Client ID: 134293
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 10:46
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:40
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:18
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	34500000		ug/kg	2630000	--	25000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-19 D
 Client ID: 134294
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 09:36
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:40
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/11/12 18:05
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/12/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1440	--	10
Aroclor 1221	ND		ug/kg	1440	--	10
Aroclor 1232	ND		ug/kg	1440	--	10
Aroclor 1242	ND		ug/kg	1440	--	10
Aroclor 1248	ND		ug/kg	957	--	10
Aroclor 1254	2230		ug/kg	1440	--	10
Aroclor 1260	ND		ug/kg	957	--	10
Aroclor 1262	ND		ug/kg	478	--	10
Aroclor 1268	ND		ug/kg	478	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-20 D
 Client ID: 134295
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 09:54
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:45
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/11/12 18:05
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/12/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	685	--	5
Aroclor 1221	ND		ug/kg	685	--	5
Aroclor 1232	ND		ug/kg	685	--	5
Aroclor 1242	ND		ug/kg	685	--	5
Aroclor 1248	ND		ug/kg	457	--	5
Aroclor 1260	ND		ug/kg	457	--	5
Aroclor 1262	ND		ug/kg	228	--	5
Aroclor 1268	ND		ug/kg	228	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	67		30-150
Decachlorobiphenyl	62		30-150
2,4,5,6-Tetrachloro-m-xylene	64		30-150
Decachlorobiphenyl	77		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-20 D
 Client ID: 134295
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 09:54
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:45
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/11/12 18:05
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/12/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	7000		ug/kg	685	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	67		30-150
Decachlorobiphenyl	62		30-150
2,4,5,6-Tetrachloro-m-xylene	64		30-150
Decachlorobiphenyl	77		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-21 D
 Client ID: 134296
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 11:03
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:45
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2420000	--	20000
Aroclor 1221	ND		ug/kg	2420000	--	20000
Aroclor 1232	ND		ug/kg	2420000	--	20000
Aroclor 1242	ND		ug/kg	2420000	--	20000
Aroclor 1248	ND		ug/kg	1610000	--	20000
Aroclor 1260	ND		ug/kg	1610000	--	20000
Aroclor 1262	ND		ug/kg	806000	--	20000
Aroclor 1268	ND		ug/kg	806000	--	20000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-21 D
 Client ID: 134296
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 11:03
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:45
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	45900000		ug/kg	2420000	--	20000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-22 D
 Client ID: 134297
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 11:20
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:05
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1380000	--	10000
Aroclor 1221	ND		ug/kg	1380000	--	10000
Aroclor 1232	ND		ug/kg	1380000	--	10000
Aroclor 1242	ND		ug/kg	1380000	--	10000
Aroclor 1248	ND		ug/kg	917000	--	10000
Aroclor 1260	ND		ug/kg	917000	--	10000
Aroclor 1262	ND		ug/kg	459000	--	10000
Aroclor 1268	ND		ug/kg	459000	--	10000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-22 D
 Client ID: 134297
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 11:20
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:05
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	21700000		ug/kg	1380000	--	10000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-23 **D**
Client ID: 134298
Sample Location: Not Specified
Matrix: Solid
Analytical Method: 1,8082
Analytical Date: 06/11/12 22:58
Analyst: KB
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:05
Date Received: 06/07/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 06/07/12 18:00
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/08/12
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	564	--	5
Aroclor 1221	ND		ug/kg	564	--	5
Aroclor 1232	ND		ug/kg	564	--	5
Aroclor 1242	ND		ug/kg	564	--	5
Aroclor 1248	ND		ug/kg	376	--	5
Aroclor 1260	ND		ug/kg	376	--	5
Aroclor 1262	ND		ug/kg	188	--	5
Aroclor 1268	ND		ug/kg	188	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	33		30-150
Decachlorobiphenyl	37		30-150
2,4,5,6-Tetrachloro-m-xylene	30		30-150
Decachlorobiphenyl	46		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-23 D
 Client ID: 134298
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/11/12 22:58
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:05
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	3320		ug/kg	564	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	33		30-150
Decachlorobiphenyl	37		30-150
2,4,5,6-Tetrachloro-m-xylene	30		30-150
Decachlorobiphenyl	46		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-24 D
 Client ID: 134299
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/11/12 23:11
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:10
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	228	--	2
Aroclor 1221	ND		ug/kg	228	--	2
Aroclor 1232	ND		ug/kg	228	--	2
Aroclor 1242	ND		ug/kg	228	--	2
Aroclor 1248	ND		ug/kg	152	--	2
Aroclor 1260	ND		ug/kg	152	--	2
Aroclor 1262	ND		ug/kg	76.0	--	2
Aroclor 1268	ND		ug/kg	76.0	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	32		30-150
Decachlorobiphenyl	52		30-150
2,4,5,6-Tetrachloro-m-xylene	25	Q	30-150
Decachlorobiphenyl	57		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-24 D
 Client ID: 134299
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/11/12 23:11
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:10
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	3310		ug/kg	228	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	32		30-150
Decachlorobiphenyl	52		30-150
2,4,5,6-Tetrachloro-m-xylene	25	Q	30-150
Decachlorobiphenyl	57		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-25 D
 Client ID: 134300
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 18:36
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:10
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1420	--	25
Aroclor 1221	ND		ug/kg	1420	--	25
Aroclor 1232	ND		ug/kg	1420	--	25
Aroclor 1242	ND		ug/kg	1420	--	25
Aroclor 1248	ND		ug/kg	943	--	25
Aroclor 1260	ND		ug/kg	943	--	25
Aroclor 1262	ND		ug/kg	472	--	25
Aroclor 1268	ND		ug/kg	472	--	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-25 D
 Client ID: 134300
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 18:36
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:10
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	1900		ug/kg	1420	--	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-26 D
 Client ID: 134301
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 18:49
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:10
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	4840	--	40
Aroclor 1221	ND		ug/kg	4840	--	40
Aroclor 1232	ND		ug/kg	4840	--	40
Aroclor 1242	ND		ug/kg	4840	--	40
Aroclor 1248	ND		ug/kg	3220	--	40
Aroclor 1254	ND		ug/kg	4840	--	40
Aroclor 1260	ND		ug/kg	3220	--	40
Aroclor 1262	ND		ug/kg	1610	--	40
Aroclor 1268	ND		ug/kg	1610	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-27 D
 Client ID: 134302
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 19:01
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:10
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	3360	--	25
Aroclor 1221	ND		ug/kg	3360	--	25
Aroclor 1232	ND		ug/kg	3360	--	25
Aroclor 1242	ND		ug/kg	3360	--	25
Aroclor 1248	ND		ug/kg	2240	--	25
Aroclor 1254	ND		ug/kg	3360	--	25
Aroclor 1260	ND		ug/kg	2240	--	25
Aroclor 1262	ND		ug/kg	1120	--	25
Aroclor 1268	ND		ug/kg	1120	--	25

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-28 D
 Client ID: 134303
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 10:11
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:20
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1330	--	10
Aroclor 1221	ND		ug/kg	1330	--	10
Aroclor 1232	ND		ug/kg	1330	--	10
Aroclor 1242	ND		ug/kg	1330	--	10
Aroclor 1248	ND		ug/kg	889	--	10
Aroclor 1254	12200		ug/kg	1330	--	10
Aroclor 1260	ND		ug/kg	889	--	10
Aroclor 1262	ND		ug/kg	444	--	10
Aroclor 1268	ND		ug/kg	444	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-29 D
 Client ID: 134304
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 10:28
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:20
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	64400	--	500
Aroclor 1221	ND		ug/kg	64400	--	500
Aroclor 1232	ND		ug/kg	64400	--	500
Aroclor 1242	ND		ug/kg	64400	--	500
Aroclor 1248	ND		ug/kg	42900	--	500
Aroclor 1254	783000		ug/kg	64400	--	500
Aroclor 1260	ND		ug/kg	42900	--	500
Aroclor 1262	ND		ug/kg	21400	--	500
Aroclor 1268	ND		ug/kg	21400	--	500

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-30 **D**
Client ID: 134305
Sample Location: Not Specified
Matrix: Solid
Analytical Method: 1,8082
Analytical Date: 06/13/12 19:13
Analyst: SS
Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:35
Date Received: 06/07/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 06/12/12 11:10
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/13/12
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	290	--	5
Aroclor 1221	ND		ug/kg	290	--	5
Aroclor 1232	ND		ug/kg	290	--	5
Aroclor 1242	ND		ug/kg	290	--	5
Aroclor 1248	ND		ug/kg	193	--	5
Aroclor 1254	ND		ug/kg	290	--	5
Aroclor 1260	ND		ug/kg	193	--	5
Aroclor 1262	ND		ug/kg	96.7	--	5
Aroclor 1268	ND		ug/kg	96.7	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	62		30-150
Decachlorobiphenyl	64		30-150
2,4,5,6-Tetrachloro-m-xylene	56		30-150
Decachlorobiphenyl	57		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-31 D
 Client ID: 134306
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 19:26
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:45
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	300	--	5
Aroclor 1221	ND		ug/kg	300	--	5
Aroclor 1232	ND		ug/kg	300	--	5
Aroclor 1242	ND		ug/kg	300	--	5
Aroclor 1248	ND		ug/kg	200	--	5
Aroclor 1254	ND		ug/kg	300	--	5
Aroclor 1260	ND		ug/kg	200	--	5
Aroclor 1262	ND		ug/kg	100	--	5
Aroclor 1268	ND		ug/kg	100	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	68		30-150
Decachlorobiphenyl	70		30-150
2,4,5,6-Tetrachloro-m-xylene	62		30-150
Decachlorobiphenyl	62		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-32 D
 Client ID: 134307
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 12:30
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:45
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2640	--	50
Aroclor 1221	ND		ug/kg	2640	--	50
Aroclor 1232	ND		ug/kg	2640	--	50
Aroclor 1242	ND		ug/kg	2640	--	50
Aroclor 1248	ND		ug/kg	1760	--	50
Aroclor 1260	ND		ug/kg	1760	--	50
Aroclor 1262	ND		ug/kg	879	--	50
Aroclor 1268	ND		ug/kg	879	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-32 D
 Client ID: 134307
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/14/12 12:30
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 15:45
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	32600		ug/kg	2640	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-33 D
 Client ID: 134289
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 19:50
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:25
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	575	--	10
Aroclor 1221	ND		ug/kg	575	--	10
Aroclor 1232	ND		ug/kg	575	--	10
Aroclor 1242	ND		ug/kg	575	--	10
Aroclor 1248	ND		ug/kg	383	--	10
Aroclor 1260	ND		ug/kg	383	--	10
Aroclor 1262	ND		ug/kg	192	--	10
Aroclor 1268	ND		ug/kg	192	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-33 D
 Client ID: 134289
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 19:50
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:25
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	3760		ug/kg	575	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-34 D
 Client ID: 134290
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 20:03
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:25
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	575	--	10
Aroclor 1221	ND		ug/kg	575	--	10
Aroclor 1232	ND		ug/kg	575	--	10
Aroclor 1242	ND		ug/kg	575	--	10
Aroclor 1248	ND		ug/kg	383	--	10
Aroclor 1260	ND		ug/kg	383	--	10
Aroclor 1262	ND		ug/kg	192	--	10
Aroclor 1268	ND		ug/kg	192	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-34 D
 Client ID: 134290
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 20:03
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:25
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	3490		ug/kg	575	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-35 D
 Client ID: 134291
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 20:15
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:35
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	586	--	10
Aroclor 1221	ND		ug/kg	586	--	10
Aroclor 1232	ND		ug/kg	586	--	10
Aroclor 1242	ND		ug/kg	586	--	10
Aroclor 1248	ND		ug/kg	391	--	10
Aroclor 1260	ND		ug/kg	391	--	10
Aroclor 1262	ND		ug/kg	195	--	10
Aroclor 1268	ND		ug/kg	195	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**SAMPLE RESULTS**

Lab ID: L1210111-35 D
 Client ID: 134291
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 06/13/12 20:15
 Analyst: SS
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/06/12 14:35
 Date Received: 06/07/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	2710		ug/kg	586	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: 17515 PHASE II

Lab Number: L1210111

Project Number: 17515 PHASE II

Report Date: 06/14/12

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8082
 Analytical Date: 06/11/12 13:47
 Analyst: BA

Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/09/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB by GC - Westborough Lab for sample(s): 02-04,07-14,17 Batch: WG540704-1					
Aroclor 1016	ND		ug/kg	58.4	--
Aroclor 1221	ND		ug/kg	58.4	--
Aroclor 1232	ND		ug/kg	58.4	--
Aroclor 1242	ND		ug/kg	58.4	--
Aroclor 1248	ND		ug/kg	38.9	--
Aroclor 1260	ND		ug/kg	38.9	--
Aroclor 1262	ND		ug/kg	19.4	--
Aroclor 1268	ND		ug/kg	19.4	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	71		30-150
Decachlorobiphenyl	52		30-150
2,4,5,6-Tetrachloro-m-xylene	63		30-150
Decachlorobiphenyl	49		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**Method Blank Analysis**
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 06/11/12 13:47
Analyst: BA

Extraction Method: EPA 3540C
Extraction Date: 06/07/12 18:00
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/09/12
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/09/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB by GC - Westborough Lab for sample(s): 02-04,07-14,17 Batch: WG540704-1					
Aroclor 1254	65.9		ug/kg	58.4	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	71		30-150
Decachlorobiphenyl	52		30-150
2,4,5,6-Tetrachloro-m-xylene	63		30-150
Decachlorobiphenyl	49		30-150

Project Name: 17515 PHASE II

Lab Number: L1210111

Project Number: 17515 PHASE II

Report Date: 06/14/12

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8082
 Analytical Date: 06/11/12 14:32
 Analyst: KB

Extraction Method: EPA 3540C
 Extraction Date: 06/07/12 18:18
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/08/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB by GC - Westborough Lab for sample(s): 18,21-24,28-29 Batch: WG540723-1					
Aroclor 1016	ND		ug/kg	58.4	--
Aroclor 1221	ND		ug/kg	58.4	--
Aroclor 1232	ND		ug/kg	58.4	--
Aroclor 1242	ND		ug/kg	58.4	--
Aroclor 1248	ND		ug/kg	38.9	--
Aroclor 1260	ND		ug/kg	38.9	--
Aroclor 1262	ND		ug/kg	19.4	--
Aroclor 1268	ND		ug/kg	19.4	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	62		30-150
Decachlorobiphenyl	55		30-150
2,4,5,6-Tetrachloro-m-xylene	68		30-150
Decachlorobiphenyl	62		30-150

Project Name: 17515 PHASE II
Project Number: 17515 PHASE II

Lab Number: L1210111
Report Date: 06/14/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 06/11/12 14:32
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 06/07/12 18:18
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/08/12
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/08/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB by GC - Westborough Lab for sample(s): 18,21-24,28-29 Batch: WG540723-1					
Aroclor 1254	163		ug/kg	58.4	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	62		30-150
Decachlorobiphenyl	55		30-150
2,4,5,6-Tetrachloro-m-xylene	68		30-150
Decachlorobiphenyl	62		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
 Analytical Date: 06/14/12 08:09
 Analyst: BA

Extraction Method: EPA 3540C
 Extraction Date: 06/11/12 18:05
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/12/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/12/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB by GC - Westborough Lab for sample(s): 01,05-06,15-16,19-20 Batch: WG541382-1					
Aroclor 1016	ND		ug/kg	57.2	--
Aroclor 1221	ND		ug/kg	57.2	--
Aroclor 1232	ND		ug/kg	57.2	--
Aroclor 1242	ND		ug/kg	57.2	--
Aroclor 1248	ND		ug/kg	38.2	--
Aroclor 1254	ND		ug/kg	57.2	--
Aroclor 1260	ND		ug/kg	38.2	--
Aroclor 1262	ND		ug/kg	19.1	--
Aroclor 1268	ND		ug/kg	19.1	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	78		30-150
Decachlorobiphenyl	79		30-150
2,4,5,6-Tetrachloro-m-xylene	76		30-150
Decachlorobiphenyl	74		30-150

Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12

Method Blank Analysis Batch Quality Control

Analytical Method: 1,8082
 Analytical Date: 06/14/12 12:47
 Analyst: SS

Extraction Method: EPA 3540C
 Extraction Date: 06/12/12 11:10
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/13/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/13/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB by GC - Westborough Lab for sample(s): 25-27,30-35 Batch: WG541553-1					
Aroclor 1016	ND		ug/kg	59.6	--
Aroclor 1221	ND		ug/kg	59.6	--
Aroclor 1232	ND		ug/kg	59.6	--
Aroclor 1242	ND		ug/kg	59.6	--
Aroclor 1248	ND		ug/kg	39.8	--
Aroclor 1254	ND		ug/kg	59.6	--
Aroclor 1260	ND		ug/kg	39.8	--
Aroclor 1262	ND		ug/kg	19.9	--
Aroclor 1268	ND		ug/kg	19.9	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	90		30-150
Decachlorobiphenyl	81		30-150
2,4,5,6-Tetrachloro-m-xylene	66		30-150
Decachlorobiphenyl	71		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: 17515 PHASE II

Lab Number: L1210111

Project Number: 17515 PHASE II

Report Date: 06/14/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB by GC - Westborough Lab Associated sample(s): 02-04,07-14,17 Batch: WG540704-2 WG540704-3								
Aroclor 1016	43		47		40-140	9		50
Aroclor 1260	44		44		40-140	0		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	54		52		30-150
Decachlorobiphenyl	51		51		30-150
2,4,5,6-Tetrachloro-m-xylene	62		60		30-150
Decachlorobiphenyl	58		54		30-150

PCB by GC - Westborough Lab Associated sample(s): 18,21-24,28-29 Batch: WG540723-2 WG540723-3								
Aroclor 1016	53		66		40-140	22		50
Aroclor 1260	76		72		40-140	5		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	70		74		30-150
Decachlorobiphenyl	58		70		30-150
2,4,5,6-Tetrachloro-m-xylene	61		67		30-150
Decachlorobiphenyl	85		70		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: 17515 PHASE II

Lab Number: L1210111

Project Number: 17515 PHASE II

Report Date: 06/14/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB by GC - Westborough Lab Associated sample(s): 01,05-06,15-16,19-20 Batch: WG541382-2 WG541382-3								
Aroclor 1016	56		71		40-140	24		50
Aroclor 1260	78		81		40-140	4		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	71		84		30-150
Decachlorobiphenyl	80		68		30-150
2,4,5,6-Tetrachloro-m-xylene	66		80		30-150
Decachlorobiphenyl	55		83		30-150

PCB by GC - Westborough Lab Associated sample(s): 25-27,30-35 Batch: WG541553-2 WG541553-3								
Aroclor 1016	89		69		40-140	25		50
Aroclor 1260	97		77		40-140	23		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	83		73		30-150
Decachlorobiphenyl	82		65		30-150
2,4,5,6-Tetrachloro-m-xylene	80		72		30-150
Decachlorobiphenyl	81		88		30-150

Project Name: 17515 PHASE II

Lab Number: L1210111

Project Number: 17515 PHASE II

Report Date: 06/14/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1210111-01A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-02A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-03A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-04A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-05A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-06A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-07A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-08A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-09A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-10A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-11A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-12A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-13A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-14A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-15A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-16A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-17A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-18A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-19A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-20A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-21A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-22A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-23A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-24A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-25A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-26A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-27A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)

*Values in parentheses indicate holding time in days



Project Name: 17515 PHASE II**Lab Number:** L1210111**Project Number:** 17515 PHASE II**Report Date:** 06/14/12**Container Information**

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1210111-28A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-29A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-30A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-31A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-32A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-33A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-34A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)
L1210111-35A	Amber 250ml unpreserved	A	N/A	4.6	Y	Absent	PCB-8082LL-3540C(14)

*Values in parentheses indicate holding time in days

Project Name: 17515 PHASE II
Project Number: 17515 PHASE II

Lab Number: L1210111
Report Date: 06/14/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- | | |
|-----------|---|
| A | - Spectra identified as "Aldol Condensation Product". |
| B | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. |
| C | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses. |
| D | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte. |
| E | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument. |
| G | - The concentration may be biased high due to matrix interferences (i.e., co-elution) with non-target compound(s). The result should be considered estimated. |
| H | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. |
| I | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference. |
| M | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. |
| NJ | - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search. |

Report Format: Data Usability Report



Project Name: 17515 PHASE II
Project Number: 17515 PHASE II

Lab Number: L1210111
Report Date: 06/14/12

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: 17515 PHASE II
Project Number: 17515 PHASE II

Lab Number: L1210111
Report Date: 06/14/12

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised May 11, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D, Fecal Coliform-EC Medium 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterolert, E.Coli 9223.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics, Acid Extractables (Phenols), Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8082, 8330, 8151A, 8260B, 8270C, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9030B, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6010C, 6020, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9030B, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8081B, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 6010C, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050, 9065, 1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3550B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, 8151A, 8015B, 8082, 8082A, 8081A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, 2540G, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 624, 8260B, 8270C, 8270D, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012A, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C, 3546, 3580, 3580A, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. **NELAP Accredited.**
Drinking Water (Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 1312, 3005A, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P, BE. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 3060A, 6010B, 6010C, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH₃-H. Organic Parameters: 3540C, 3546, 3580A, 3630C, 5035, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. **NELAP Accredited via NY-DOH.**

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commissoon on Environmental Quality Certificate/Lab ID: T104704476-09-1. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH₃-H, 4500NO₂B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 3005A, 3015, 1312, 6010B, 6010C, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X. Organic Parameters: EPA 8260B)

Solid & Hazardous Waste (Inorganic Parameters: EPA 3050B, 1311, 1312, 6010B, 6010C, 9030B, 9010B, 9012A, 9014. Organic Parameters: EPA 5035, 5030B, 8260B, 8015B, 8015C.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1. 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO₃-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methylnaphthalenes, Total Dimethylnaphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix. **EPA 9071**: Total Petroleum Hydrocarbons, Oil & Grease

CHAIN OF CUSTODY FORM

DATE: 7 JUNE 2012 L120L1210111

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: ALPHA ANALYTICAL

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17515 PHASE II

The cost of this analysis will be covered by EH&E Purchase Order # _____

For EH & E Data Coordinator - URGENT DATA ☐

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER: Time/Date/Vol.
01	134273	BULK	EPA 8082 PCB'S w/ SOXHELET EXTRACTION	6 JUNE 2012 1200
02	134274			1215
03	134275			1215
04	134276			1215
05	134277			1225
06	134278			1225
07	134279			1230
08	134280			1230
09	134281			1235
10	134282			1235
11	134283			1235
12	134284			1235
13	134285			1240
14	134286			1240
15	134287			1420
16	134288			1420

Special instructions:

- ☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____
☐ Fax results 781-247-4305 ☒ Electronic transfer - datacoordinator@ehinc.com
☐ RETURN SAMPLES ☒ Additional report recipient CCAMP2SANO@EHEINC.COM, ABLSO@EHEINC.COM

Each signatory please return one copy of this form to the above address

Relinquished by: [Signature] of Environmental Health & Engineering, Inc. Date: 7 JUNE 2012
Received by: [Signature] of (company name) ALPHA Date: 7 JUNE 2012
Relinquished by: [Signature] of (company name) ALPHA Date: 7 JUNE 2012 1420
Received by: [Signature] of (company name) Alpha Date: 7 JUNE 2012 1420
Relinquished by: _____ of (company name) _____ Date: _____
Received by: _____ of (company name) _____ Date: _____
Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 1 of 3

CHAIN OF CUSTODY FORM

L121011

DATE: 7 JUNE 2012

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: ALPHA ANALYTICAL

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17515 PHASE II

The cost of this analysis will be covered by EH&E Purchase Order # _____

For EH & E Data Coordinator - URGENT DATA ☐

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
-17	134292	BULK	EPA 8082 PCBs w/soxhlet extraction	6 JUNE 12 1435
-18	134293			1440
-19	134294			1440
-20	134295			1445
-21	134296			1445
-22	134297			1505
-23	134298			1505
-24	134299			1510
-25	134300			1510
-26	134301			1510
-27	134302			1510
-28	134303			1520
-29	134304			1520
-30	134305			1535
-31	134306			1545
-32	134307			1545

Special instructions:

- ☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____
☐ Fax results 781-247-4305 ☒ Electronic transfer - datacoordinator@ehinc.com
☐ RETURN SAMPLES ☒ Additional report recipient CCAMPESANO@EHEINC.COM, ASZSU@EHEINC.COM

Each signatory please return one copy of this form to the above address

Relinquished by: [Signature] of Environmental Health & Engineering, Inc. Date: 7 JUNE 2012
Received by: YAM of (company name) ALPHA Date: 7 JUNE 2012
Relinquished by: [Signature] of (company name) ALPHA Date: 7 JUNE 2012 1420
Received by: [Signature] of (company name) Alpha Date: 7 JUNE 2012 1420
Relinquished by: _____ of (company name) _____ Date: _____
Received by: _____ of (company name) _____ Date: _____
Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 2 of 3

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: ALPHA ANALYTICAL

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17515 PHASE II

The cost of this analysis will be covered by EH&E Purchase Order #

For EH & E Data Coordinator - URGENT DATA ☐

SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
-33 134289	BULK	EPA 8082 PCB'S w/ SOXHLET EXTRACTION	65062412: 1425 1435
-34 134290	↓	↓	↓ 1425 1435
-35 134291	↓	↓	↓ 1435

Special instructions:

- ☒ Standard turn around time ☐ Rush by _____ date/time ☐ Other _____
☐ Fax results 781-247-4305 ☐ RETURN SAMPLES ☐ Electronic transfer - datacoordinator@ehinc.com
☐ Additional report recipient CAMPESANO@EH&E.ORG, ABLSOL@EH&E.ORG

Each signatory please return one copy of this form to the above address

Relinquished by: [Signature] of Environmental Health & Engineering, Inc. Date: 7 JUNE 2012
Received by: [Signature] of (company name) ALPHA Date: 7 JUNE 2012
Relinquished by: [Signature] of (company name) ALPHA Date: 7 JUNE 2012 1420
Received by: [Signature] of (company name) Alpha Date: 7 June 2012 1430
Relinquished by: _____ of (company name) _____ Date: _____
Received by: _____ of (company name) _____ Date: _____
Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____



ANALYTICAL REPORT

Lab Number:	L1211675
Client:	Environmental Health & Engineering Inc. 117 Fourth Ave Needham, MA 02494
ATTN:	Cynthia Campisano
Phone:	(781) 247-4300
Project Name:	Not Specified
Project Number:	17515 PHASE II
Report Date:	07/05/12

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Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), USDA (Permit #P-330-11-00240), NC (666), TX (T104704476), DOD (L2217), US Army Corps of Engineers.

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com



Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1211675-01	134312	Not Specified	06/29/12 13:15
L1211675-02	134313	Not Specified	06/29/12 13:20
L1211675-03	134314	Not Specified	06/29/12 13:30
L1211675-04	134315	Not Specified	06/29/12 13:40
L1211675-05	134316	Not Specified	06/29/12 13:47
L1211675-06	134317	Not Specified	06/29/12 13:52
L1211675-07	134318	Not Specified	06/29/12 14:00
L1211675-08	134319	Not Specified	06/29/12 14:05
L1211675-09	134320	Not Specified	06/29/12 14:10
L1211675-10	134321	Not Specified	06/29/12 14:20
L1211675-11	134322	Not Specified	06/29/12 14:27
L1211675-12	134323	Not Specified	06/29/12 14:30
L1211675-13	134324	Not Specified	06/29/12 14:35
L1211675-14	134325	Not Specified	06/29/12 14:45
L1211675-15	134326	Not Specified	06/29/12 14:54
L1211675-16	134327	Not Specified	06/29/12 14:59
L1211675-17	134328	Not Specified	06/29/12 15:03
L1211675-18	134329	Not Specified	06/29/12 15:10
L1211675-19	134330	Not Specified	06/29/12 15:17
L1211675-20	134331	Not Specified	06/29/12 15:20
L1211675-21	134332	Not Specified	06/29/12 15:25
L1211675-22	134333	Not Specified	06/29/12 15:30
L1211675-23	134334	Not Specified	06/29/12 15:45
L1211675-24	134335	Not Specified	06/29/12 15:55

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

Case Narrative (continued)

Sample Receipt

The samples were received at the laboratory above the required temperature range. The samples were transported to the laboratory in a cooler with ice and delivered directly from the sampling site.

PCBs

L1211675-01 through -19 were extracted by EPA Method 3580A, as required by the high level of PCBs in the samples.

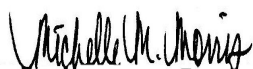
The surrogate recoveries for L1211675-01 through -19 and -22 through -24 are below the acceptance criteria for 2,4,5,6-Tetrachloro-m-xylene and Decachlorobiphenyl (all at 0%) due to the dilutions required to quantitate the samples. Re-extraction was not required; therefore, the results of the original analyses are reported.

L1211675-20 through -23 have elevated detection limits due to limited sample volumes available for analyses.

L1211675-22 has elevated detection limits due to the dilution required by matrix interferences encountered during the concentration of the sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Michelle M. Morris

Title: Technical Director/Representative

Date: 07/05/12

ORGANICS

PCBS

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-01 D
 Client ID: 134312
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 13:19
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 13:15
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2730000	--	1000
Aroclor 1221	ND		ug/kg	2730000	--	1000
Aroclor 1232	ND		ug/kg	2730000	--	1000
Aroclor 1242	ND		ug/kg	2730000	--	1000
Aroclor 1248	ND		ug/kg	1820000	--	1000
Aroclor 1254	19000000		ug/kg	2730000	--	1000
Aroclor 1260	ND		ug/kg	1820000	--	1000
Aroclor 1262	ND		ug/kg	909000	--	1000
Aroclor 1268	ND		ug/kg	909000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-02 D
 Client ID: 134313
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 13:33
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 13:20
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2440000	--	1000
Aroclor 1221	ND		ug/kg	2440000	--	1000
Aroclor 1232	ND		ug/kg	2440000	--	1000
Aroclor 1242	ND		ug/kg	2440000	--	1000
Aroclor 1248	ND		ug/kg	1630000	--	1000
Aroclor 1254	21600000		ug/kg	2440000	--	1000
Aroclor 1260	ND		ug/kg	1630000	--	1000
Aroclor 1262	ND		ug/kg	813000	--	1000
Aroclor 1268	ND		ug/kg	813000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-03 D
 Client ID: 134314
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 14:11
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 13:30
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1900000	--	1000
Aroclor 1221	ND		ug/kg	1900000	--	1000
Aroclor 1232	ND		ug/kg	1900000	--	1000
Aroclor 1242	ND		ug/kg	1900000	--	1000
Aroclor 1248	ND		ug/kg	1260000	--	1000
Aroclor 1260	ND		ug/kg	1260000	--	1000
Aroclor 1262	ND		ug/kg	633000	--	1000
Aroclor 1268	ND		ug/kg	633000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-03 D
 Client ID: 134314
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 14:11
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 13:30
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	31000000		ug/kg	1900000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-04 D
 Client ID: 134315
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 14:24
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 13:40
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1520000	--	1000
Aroclor 1221	ND		ug/kg	1520000	--	1000
Aroclor 1232	ND		ug/kg	1520000	--	1000
Aroclor 1242	ND		ug/kg	1520000	--	1000
Aroclor 1248	ND		ug/kg	1020000	--	1000
Aroclor 1254	16300000		ug/kg	1520000	--	1000
Aroclor 1260	ND		ug/kg	1020000	--	1000
Aroclor 1262	ND		ug/kg	508000	--	1000
Aroclor 1268	ND		ug/kg	508000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-05 D
 Client ID: 134316
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 14:37
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 13:47
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2480000	--	1000
Aroclor 1221	ND		ug/kg	2480000	--	1000
Aroclor 1232	ND		ug/kg	2480000	--	1000
Aroclor 1242	ND		ug/kg	2480000	--	1000
Aroclor 1248	ND		ug/kg	1650000	--	1000
Aroclor 1260	ND		ug/kg	1650000	--	1000
Aroclor 1262	ND		ug/kg	826000	--	1000
Aroclor 1268	ND		ug/kg	826000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-05 D
 Client ID: 134316
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 14:37
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 13:47
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	23500000		ug/kg	2480000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-06 D
 Client ID: 134317
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 14:50
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 13:52
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2400000	--	1000
Aroclor 1221	ND		ug/kg	2400000	--	1000
Aroclor 1232	ND		ug/kg	2400000	--	1000
Aroclor 1242	ND		ug/kg	2400000	--	1000
Aroclor 1248	ND		ug/kg	1600000	--	1000
Aroclor 1254	20000000		ug/kg	2400000	--	1000
Aroclor 1260	ND		ug/kg	1600000	--	1000
Aroclor 1262	ND		ug/kg	800000	--	1000
Aroclor 1268	ND		ug/kg	800000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-07 D
 Client ID: 134318
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 15:04
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:00
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1900000	--	1000
Aroclor 1221	ND		ug/kg	1900000	--	1000
Aroclor 1232	ND		ug/kg	1900000	--	1000
Aroclor 1242	ND		ug/kg	1900000	--	1000
Aroclor 1248	ND		ug/kg	1260000	--	1000
Aroclor 1254	12400000		ug/kg	1900000	--	1000
Aroclor 1260	ND		ug/kg	1260000	--	1000
Aroclor 1262	ND		ug/kg	633000	--	1000
Aroclor 1268	ND		ug/kg	633000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-08 D
 Client ID: 134319
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 15:17
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:05
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1920000	--	1000
Aroclor 1221	ND		ug/kg	1920000	--	1000
Aroclor 1232	ND		ug/kg	1920000	--	1000
Aroclor 1242	ND		ug/kg	1920000	--	1000
Aroclor 1248	ND		ug/kg	1280000	--	1000
Aroclor 1254	19800000		ug/kg	1920000	--	1000
Aroclor 1260	ND		ug/kg	1280000	--	1000
Aroclor 1262	ND		ug/kg	641000	--	1000
Aroclor 1268	ND		ug/kg	641000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-09 D
 Client ID: 134320
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 15:44
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:10
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2260000	--	1000
Aroclor 1221	ND		ug/kg	2260000	--	1000
Aroclor 1232	ND		ug/kg	2260000	--	1000
Aroclor 1242	ND		ug/kg	2260000	--	1000
Aroclor 1248	ND		ug/kg	1500000	--	1000
Aroclor 1254	30000000		ug/kg	2260000	--	1000
Aroclor 1260	ND		ug/kg	1500000	--	1000
Aroclor 1262	ND		ug/kg	752000	--	1000
Aroclor 1268	ND		ug/kg	752000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-10 D
 Client ID: 134321
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 16:10
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:20
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:40
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2220000	--	1000
Aroclor 1221	ND		ug/kg	2220000	--	1000
Aroclor 1232	ND		ug/kg	2220000	--	1000
Aroclor 1242	ND		ug/kg	2220000	--	1000
Aroclor 1248	ND		ug/kg	1480000	--	1000
Aroclor 1254	15400000		ug/kg	2220000	--	1000
Aroclor 1260	ND		ug/kg	1480000	--	1000
Aroclor 1262	ND		ug/kg	741000	--	1000
Aroclor 1268	ND		ug/kg	741000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-11 D
 Client ID: 134322
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 16:23
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:27
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2190000	--	1000
Aroclor 1221	ND		ug/kg	2190000	--	1000
Aroclor 1232	ND		ug/kg	2190000	--	1000
Aroclor 1242	ND		ug/kg	2190000	--	1000
Aroclor 1248	ND		ug/kg	1460000	--	1000
Aroclor 1254	29700000		ug/kg	2190000	--	1000
Aroclor 1260	ND		ug/kg	1460000	--	1000
Aroclor 1262	ND		ug/kg	730000	--	1000
Aroclor 1268	ND		ug/kg	730000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-12 D
 Client ID: 134323
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 16:37
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:30
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2520000	--	1000
Aroclor 1221	ND		ug/kg	2520000	--	1000
Aroclor 1232	ND		ug/kg	2520000	--	1000
Aroclor 1242	ND		ug/kg	2520000	--	1000
Aroclor 1248	ND		ug/kg	1680000	--	1000
Aroclor 1254	24900000		ug/kg	2520000	--	1000
Aroclor 1260	ND		ug/kg	1680000	--	1000
Aroclor 1262	ND		ug/kg	840000	--	1000
Aroclor 1268	ND		ug/kg	840000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-13 D
 Client ID: 134324
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 16:50
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:35
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2130000	--	1000
Aroclor 1221	ND		ug/kg	2130000	--	1000
Aroclor 1232	ND		ug/kg	2130000	--	1000
Aroclor 1242	ND		ug/kg	2130000	--	1000
Aroclor 1248	ND		ug/kg	1420000	--	1000
Aroclor 1254	21300000		ug/kg	2130000	--	1000
Aroclor 1260	ND		ug/kg	1420000	--	1000
Aroclor 1262	ND		ug/kg	709000	--	1000
Aroclor 1268	ND		ug/kg	709000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-14 D
 Client ID: 134325
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 17:03
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:45
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1700000	--	1000
Aroclor 1221	ND		ug/kg	1700000	--	1000
Aroclor 1232	ND		ug/kg	1700000	--	1000
Aroclor 1242	ND		ug/kg	1700000	--	1000
Aroclor 1248	ND		ug/kg	1140000	--	1000
Aroclor 1260	ND		ug/kg	1140000	--	1000
Aroclor 1262	ND		ug/kg	568000	--	1000
Aroclor 1268	ND		ug/kg	568000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-14 D
 Client ID: 134325
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 17:03
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:45
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	17600000		ug/kg	1700000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-15 D
 Client ID: 134326
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 17:16
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:54
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2290000	--	1000
Aroclor 1221	ND		ug/kg	2290000	--	1000
Aroclor 1232	ND		ug/kg	2290000	--	1000
Aroclor 1242	ND		ug/kg	2290000	--	1000
Aroclor 1248	ND		ug/kg	1530000	--	1000
Aroclor 1260	ND		ug/kg	1530000	--	1000
Aroclor 1262	ND		ug/kg	763000	--	1000
Aroclor 1268	ND		ug/kg	763000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-15 D
 Client ID: 134326
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 17:16
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:54
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	23100000		ug/kg	2290000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-16 D
 Client ID: 134327
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 17:30
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 14:59
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2260000	--	1000
Aroclor 1221	ND		ug/kg	2260000	--	1000
Aroclor 1232	ND		ug/kg	2260000	--	1000
Aroclor 1242	ND		ug/kg	2260000	--	1000
Aroclor 1248	ND		ug/kg	1500000	--	1000
Aroclor 1254	31500000		ug/kg	2260000	--	1000
Aroclor 1260	ND		ug/kg	1500000	--	1000
Aroclor 1262	ND		ug/kg	752000	--	1000
Aroclor 1268	ND		ug/kg	752000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-17 D
 Client ID: 134328
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 17:43
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:03
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	2140000	--	1000
Aroclor 1221	ND		ug/kg	2140000	--	1000
Aroclor 1232	ND		ug/kg	2140000	--	1000
Aroclor 1242	ND		ug/kg	2140000	--	1000
Aroclor 1248	ND		ug/kg	1430000	--	1000
Aroclor 1254	20200000		ug/kg	2140000	--	1000
Aroclor 1260	ND		ug/kg	1430000	--	1000
Aroclor 1262	ND		ug/kg	714000	--	1000
Aroclor 1268	ND		ug/kg	714000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-18 D
 Client ID: 134329
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 17:56
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:10
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1990000	--	1000
Aroclor 1221	ND		ug/kg	1990000	--	1000
Aroclor 1232	ND		ug/kg	1990000	--	1000
Aroclor 1242	ND		ug/kg	1990000	--	1000
Aroclor 1248	ND		ug/kg	1320000	--	1000
Aroclor 1254	26100000		ug/kg	1990000	--	1000
Aroclor 1260	ND		ug/kg	1320000	--	1000
Aroclor 1262	ND		ug/kg	662000	--	1000
Aroclor 1268	ND		ug/kg	662000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-19 D
 Client ID: 134330
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 18:23
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:17
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	1810000	--	1000
Aroclor 1221	ND		ug/kg	1810000	--	1000
Aroclor 1232	ND		ug/kg	1810000	--	1000
Aroclor 1242	ND		ug/kg	1810000	--	1000
Aroclor 1248	ND		ug/kg	1200000	--	1000
Aroclor 1260	ND		ug/kg	1200000	--	1000
Aroclor 1262	ND		ug/kg	602000	--	1000
Aroclor 1268	ND		ug/kg	602000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-19 D
 Client ID: 134330
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/03/12 18:23
 Analyst: BA
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:17
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3580A
 Extraction Date: 06/29/12 18:41
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 06/30/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	20900000		ug/kg	1810000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-20 D
 Client ID: 134331
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/05/12 13:05
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:20
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/03/12 13:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 07/04/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 07/04/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	513	--	4
Aroclor 1221	ND		ug/kg	513	--	4
Aroclor 1232	ND		ug/kg	513	--	4
Aroclor 1242	ND		ug/kg	513	--	4
Aroclor 1248	ND		ug/kg	342	--	4
Aroclor 1254	10900		ug/kg	513	--	4
Aroclor 1260	ND		ug/kg	342	--	4
Aroclor 1262	ND		ug/kg	171	--	4
Aroclor 1268	ND		ug/kg	171	--	4

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	88		30-150
Decachlorobiphenyl	89		30-150
2,4,5,6-Tetrachloro-m-xylene	75		30-150
Decachlorobiphenyl	74		30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-21
 Client ID: 134332
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/05/12 10:24
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:25
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/03/12 13:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 07/04/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 07/04/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	210	--	1
Aroclor 1221	ND		ug/kg	210	--	1
Aroclor 1232	ND		ug/kg	210	--	1
Aroclor 1242	ND		ug/kg	210	--	1
Aroclor 1248	ND		ug/kg	140	--	1
Aroclor 1260	ND		ug/kg	140	--	1
Aroclor 1262	ND		ug/kg	69.9	--	1
Aroclor 1268	ND		ug/kg	69.9	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	84		30-150
Decachlorobiphenyl	72		30-150
2,4,5,6-Tetrachloro-m-xylene	71		30-150
Decachlorobiphenyl	86		30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-21
 Client ID: 134332
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/05/12 10:24
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:25
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/03/12 13:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 07/04/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 07/04/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1254	3120		ug/kg	210	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	84		30-150
Decachlorobiphenyl	72		30-150
2,4,5,6-Tetrachloro-m-xylene	71		30-150
Decachlorobiphenyl	86		30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-22 D
 Client ID: 134333
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/05/12 13:18
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:30
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/03/12 13:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 07/04/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 07/04/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	4300	--	40
Aroclor 1221	ND		ug/kg	4300	--	40
Aroclor 1232	ND		ug/kg	4300	--	40
Aroclor 1242	ND		ug/kg	4300	--	40
Aroclor 1248	ND		ug/kg	2870	--	40
Aroclor 1254	85200		ug/kg	4300	--	40
Aroclor 1260	ND		ug/kg	2870	--	40
Aroclor 1262	ND		ug/kg	1430	--	40
Aroclor 1268	ND		ug/kg	1430	--	40

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-23 D
 Client ID: 134334
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/05/12 13:31
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:45
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/03/12 13:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 07/04/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 07/04/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	17200	--	100
Aroclor 1221	ND		ug/kg	17200	--	100
Aroclor 1232	ND		ug/kg	17200	--	100
Aroclor 1242	ND		ug/kg	17200	--	100
Aroclor 1248	ND		ug/kg	11500	--	100
Aroclor 1254	333000		ug/kg	17200	--	100
Aroclor 1260	ND		ug/kg	11500	--	100
Aroclor 1262	ND		ug/kg	5750	--	100
Aroclor 1268	ND		ug/kg	5750	--	100

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

SAMPLE RESULTS

Lab ID: L1211675-24 D
 Client ID: 134335
 Sample Location: Not Specified
 Matrix: Solid
 Analytical Method: 1,8082
 Analytical Date: 07/05/12 13:44
 Analyst: KB
 Percent Solids: Results reported on an 'AS RECEIVED' basis.

Date Collected: 06/29/12 15:55
 Date Received: 06/29/12
 Field Prep: Not Specified
 Extraction Method: EPA 3540C
 Extraction Date: 07/03/12 13:00
 Cleanup Method1: EPA 3665A
 Cleanup Date1: 07/04/12
 Cleanup Method2: EPA 3660B
 Cleanup Date2: 07/04/12

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB by GC - Westborough Lab						
Aroclor 1016	ND		ug/kg	65900	--	1000
Aroclor 1221	ND		ug/kg	65900	--	1000
Aroclor 1232	ND		ug/kg	65900	--	1000
Aroclor 1242	ND		ug/kg	65900	--	1000
Aroclor 1248	ND		ug/kg	44000	--	1000
Aroclor 1254	886000		ug/kg	65900	--	1000
Aroclor 1260	ND		ug/kg	44000	--	1000
Aroclor 1262	ND		ug/kg	22000	--	1000
Aroclor 1268	ND		ug/kg	22000	--	1000

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150
2,4,5,6-Tetrachloro-m-xylene	0	Q	30-150
Decachlorobiphenyl	0	Q	30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 07/02/12 20:48
Analyst: BA

Extraction Method: EPA 3580A
Extraction Date: 06/29/12 18:40
Cleanup Method1: EPA 3665A
Cleanup Date1: 06/30/12
Cleanup Method2: EPA 3660B
Cleanup Date2: 06/30/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB by GC - Westborough Lab for sample(s): 01-19 Batch: WG545615-1					
Aroclor 1016	ND		ug/kg	1660	--
Aroclor 1221	ND		ug/kg	1660	--
Aroclor 1232	ND		ug/kg	1660	--
Aroclor 1242	ND		ug/kg	1660	--
Aroclor 1248	ND		ug/kg	1100	--
Aroclor 1254	ND		ug/kg	1660	--
Aroclor 1260	ND		ug/kg	1100	--
Aroclor 1262	ND		ug/kg	552	--
Aroclor 1268	ND		ug/kg	552	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	78		30-150
Decachlorobiphenyl	84		30-150
2,4,5,6-Tetrachloro-m-xylene	79		30-150
Decachlorobiphenyl	82		30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8082
Analytical Date: 07/05/12 11:14
Analyst: KB

Extraction Method: EPA 3540C
Extraction Date: 07/03/12 13:00
Cleanup Method1: EPA 3665A
Cleanup Date1: 07/04/12
Cleanup Method2: EPA 3660B
Cleanup Date2: 07/04/12

Parameter	Result	Qualifier	Units	RL	MDL
PCB by GC - Westborough Lab for sample(s): 20-24 Batch: WG546185-1					
Aroclor 1016	ND		ug/kg	54.4	--
Aroclor 1221	ND		ug/kg	54.4	--
Aroclor 1232	ND		ug/kg	54.4	--
Aroclor 1242	ND		ug/kg	54.4	--
Aroclor 1248	ND		ug/kg	36.3	--
Aroclor 1254	ND		ug/kg	54.4	--
Aroclor 1260	ND		ug/kg	36.3	--
Aroclor 1262	ND		ug/kg	18.1	--
Aroclor 1268	ND		ug/kg	18.1	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	90		30-150
Decachlorobiphenyl	70		30-150
2,4,5,6-Tetrachloro-m-xylene	89		30-150
Decachlorobiphenyl	84		30-150

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB by GC - Westborough Lab Associated sample(s): 01-19 Batch: WG545615-2 WG545615-3								
Aroclor 1016	56		66		40-140	16		50
Aroclor 1260	49		57		40-140	15		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	50		62		30-150
Decachlorobiphenyl	54		65		30-150
2,4,5,6-Tetrachloro-m-xylene	48		60		30-150
Decachlorobiphenyl	55		63		30-150

PCB by GC - Westborough Lab Associated sample(s): 20-24 Batch: WG546185-2 WG546185-3								
Aroclor 1016	83		99		40-140	18		50
Aroclor 1260	74		96		40-140	26		50

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,4,5,6-Tetrachloro-m-xylene	73		91		30-150
Decachlorobiphenyl	55		70		30-150
2,4,5,6-Tetrachloro-m-xylene	72		95		30-150
Decachlorobiphenyl	68		86		30-150

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1211675-01A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-02A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-03A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-04A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-05A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-06A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-07A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-08A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-09A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-10A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-11A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-12A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-13A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-14A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-15A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-16A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-17A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-18A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-19A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-20A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-21A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-22A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-23A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)
L1211675-24A	Amber 250ml unpreserved	A	N/A	11	Y	Absent	PCB-8082LL-3540C(14)

*Values in parentheses indicate holding time in days



Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- | | |
|-----------|---|
| A | - Spectra identified as "Aldol Condensation Product". |
| B | - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. |
| C | - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses. |
| D | - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte. |
| E | - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument. |
| G | - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated. |
| H | - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection. |
| I | - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference. |
| M | - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte. |
| NJ | - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search. |

Report Format: Data Usability Report



Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

Data Qualifiers

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: Not Specified
Project Number: 17515 PHASE II

Lab Number: L1211675
Report Date: 07/05/12

REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised May 11, 2012 - Westboro Facility

The following list includes only those analytes/methods for which certification/approval is currently held.
For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0574. **NELAP Accredited Solid Waste/Soil.**

Drinking Water (Inorganic Parameters: Color, pH, Turbidity, Conductivity, Alkalinity, Chloride, Free Residual Chlorine, Fluoride, Calcium Hardness, Sulfate, Nitrate, Nitrite, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Vanadium, Zinc, Total Dissolved Solids, Total Organic Carbon, Total Cyanide, Perchlorate. Organic Parameters: Volatile Organics 524.2, Total Trihalomethanes 524.2, 1,2-Dibromo-3-chloropropane (DBCP) 504.1, Ethylene Dibromide (EDB) 504.1, 1,4-Dioxane (Mod 8270). Microbiology Parameters: Total Coliform-MF mEndo (SM9222B), Total Coliform – Colilert (SM9223 P/A), E. Coli. – Colilert (SM9223 P/A), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D, Fecal Coliform-EC Medium 9221E).

Wastewater/Non-Potable Water (Inorganic Parameters: Color, pH, Conductivity, Acidity, Alkalinity, Chloride, Total Residual Chlorine, Fluoride, Total Hardness, Silica, Sulfate, Sulfide, Ammonia, Kjeldahl Nitrogen, Nitrate, Nitrite, O-Phosphate, Total Phosphorus, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Dissolved Solids, Total Suspended Solids (non-filterable), BOD, CBOD, COD, TOC, Total Cyanide, Phenolics, Foaming Agents (MBAS), Bromide, Oil and Grease. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Acid Extractables (Phenols), Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, Polynuclear Aromatic Hydrocarbons, Haloethers, Chlorinated Hydrocarbons, Volatile Organics, TPH (HEM/SGT), Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH. Microbiology Parameters: Total Coliform – MF mEndo (SM9222B), Total Coliform – MTF (SM9221B), HPC – Pour Plate (SM9215B), Fecal Coliform – MF m-FC (SM9222D), Fecal Coliform – A-1 Broth (SM9221E), Enterolert, E.Coli 9223.

Solid Waste/Soil (Inorganic Parameters: pH, Sulfide, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Tin, Vanadium, Zinc, Total Cyanide, Ignitability, Phenolics, Corrosivity, TCLP Leach (1311), SPLP Leach (1312 metals only), Reactivity. Organic Parameters: PCBs, PCBs in Oil, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Extractable Petroleum Hydrocarbons (ETPH), MA-EPH, MA-VPH, Dicamba, 2,4-D, 2,4,5-T, 2,4,5-TP(Silvex), Dalapon, Volatile Organics, Acid Extractables (Phenols), Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Maine Department of Human Services Certificate/Lab ID: 2009024.

Drinking Water (Inorganic Parameters: SM9215B, 9222D, 9223B, EPA 180.1, 353.2, SM2130B, 2320B, 2540C, 4500Cl-D, 4500CN-C, 4500CN-E, 4500F-C, 4500H+B, 4500NO3-F, EPA 200.7, EPA 200.8, 245.1, EPA 300.0. Organic Parameters: 504.1, 524.2.)

Wastewater/Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664A, 350.1, 351.1, 353.2, 410.4, 420.1, SM2320B, 2510B, 2540C, 2540D, 426C, 4500Cl-D, 4500Cl-E, 4500CN-C, 4500CN-E, 4500F-B, 4500F-C, 4500H+B, 4500Norg-B, 4500Norg-C, 4500NH3-B, 4500NH3-G, 4500NO3-F, 4500P-B, 4500P-E, 5210B, 5220D, 5310C, 9010B, 9040B, 9030B, 7470A, 7196A, 2340B, EPA 200.7, 6010B, 200.8, 6020, 245.1, 1311, 1312, 3005A, Enterolert, 9223D, 9222D. Organic Parameters: 608, 624, 625, 8081A, 8082, 8330, 8151A, 8260B, 8270C, 3510C, 3630C, 5030B, ME-DRO, ME-GRO, MA-EPH, MA-VPH.)

Solid Waste/Soil (Inorganic Parameters: 9010B, 9012A, 9014A, 9030B, 9040B, 9045C, 6010B, 7471A, 7196A, 9050A, 1010, 1030, 9065, 1311, 1312, 3005A, 3050B. Organic Parameters: ME-DRO, ME-GRO, MA-EPH, MA-VPH, 8260B, 8270C, 8330, 8151A, 8081A, 8082, 3540C, 3546, 3580A, 3630C, 5030B, 5035.)

Massachusetts Department of Environmental Protection Certificate/Lab ID: M-MA086.

Drinking Water (Inorganic Parameters: (EPA 200.8 for: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl) (EPA 200.7 for: Ba,Be,Ca,Cd,Cr,Cu,Na,Ni) 245.1, (300.0 for: Nitrate-N, Fluoride, Sulfate); (EPA 353.2 for: Nitrate-N, Nitrite-N); (SM4500NO3-F for: Nitrate-N and Nitrite-N); 4500F-C, 4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, 2320B, SM2540C, SM4500H-B. Organic Parameters: (EPA 524.2 for: Trihalomethanes, Volatile Organics); (504.1 for: 1,2-Dibromoethane, 1,2-Dibromo-3-Chloropropane), EPA 332. Microbiology Parameters: SM9215B; ENZ. SUB. SM9223; ColilertQT SM9223B; MF-SM9222D.)

Page 44 of 48
for: *Non-Potable Water* (Inorganic Parameters: (EPA 200.8 for: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn); (EPA 200.7 for: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn); 245.1, SM4500H,B, EPA 120.1,

SM2510B, 2540C, 2340B, 2320B, 4500CL-E, 4500F-BC, 426C, SM4500NH3-BH, (EPA 350.1 for: Ammonia-N), LACHAT 10-107-06-1-B for Ammonia-N, SM4500NO3-F, 353.2 for Nitrate-N, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, 4500P-B,E, 5220D, EPA 410.4, SM 5210B, 5310C, 4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.

Organic Parameters: (EPA 624 for Volatile Halocarbons, Volatile Aromatics),(608 for: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs-Water), (EPA 625 for SVOC Acid Extractables and SVOC Base/Neutral Extractables), 600/4-81-045-PCB-Oil. Microbiology Parameters: (ColilertQT SM9223B; Enterolert-QT: SM9222D-MF.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 200307. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM 9222B, 9223B, 9215B, EPA 200.7, 200.8, 245.2, 300.0, SM4500CN-E, 4500H+B, 4500NO3-F, 2320B, 2510B, 2540C, 4500F-C, 5310C, 2120B, EPA 332.0. Organic Parameters: 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM9222D, 9221B, 9222B, 9221E-EC, EPA 3005A, 200.7, 200.8, 245.1, 245.2, SW-846 6010B, 6010C, 6020, 6020A, 7196A, 7470A, SM3500-CR-D, EPA 120.1, 300.0, 350.1, 350.2, 351.1, 353.2, 410.4, 420.1, 426C, 1664A, SW-846 9010B, 9030B, 9040B, SM426C, SM2120B, 2310B, 2320B, 2540B, 2540D, 4500H+B, 4500CL-E, 4500CN-E, 4500NH3-H, 4500NO3-F, 4500NO2-B, 4500P-E, 4500-S2-D, 5210B, 5220D, 2510B, 2540C, 4500F-C, 5310C, 5540C, LACHAT 10-204-00-1-A, LACHAT 10-107-06-2-D. Organic Parameters: SW-846 3510C, 3630C, 5030B, 8260B, 8270C, 8270D, 8330, EPA 624, 625, 608, SW-846 8082, 8081A, 8081B, 8151A.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 6010B, 6010C, 7196A, 7471A, 1010, 1030, 9010, 9012A, 9014, 9030B, 9040B, 9045C, 9050, 9065, 1311, 1312, 3005A, 3050B, 3060A. Organic Parameters: SW-846 3540C, 3546, 3550B, 3580A, 3630C, 5030B, 5035, 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330, 8151A, 8015B, 8082, 8082A, 8081A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA935. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9222B, 9221E, 9223B, 9215B, 4500CN-CE, 4500NO3-F, 4500F-C, EPA 300.0, 200.7, 200.8, 245.2, 2540C, SM2120B, 2320B, 2510B, 5310C, SM4500H-B. Organic Parameters: EPA 332, 504.1, 524.2.)

Non-Potable Water (Inorganic Parameters: SM5210B, EPA 410.4, SM5220D, 4500CI-E, EPA 300.0, SM2120B, 2340B, SM4500F-BC, EPA 200.7, 200.8, 351.1, LACHAT 10-107-06-2-D, EPA 353.2, SM4500NO3-F, 4500NO2-B, EPA 1664A, SM5310B, C or D, 4500-PE, EPA 420.1, SM510ABC, SM4500P-B5+E, 2540B, 2540C, 2540D, 2540G, EPA 120.1, SM2510B, SM15 426C, 9222D, 9221B, 9221C, 9221E, 9222B, 9215B, 2310B, 2320B, 4500NH3-H, 4500-S D, EPA 350.1, 350.2, SW-846 1312, 7470A, 5540C, SM4500H-B, 4500SO3-B, SM3500Cr-D, 4500CN-CE, EPA 245.1, 245.2, SW-846 9040B, 3005A, 3015, EPA 6010B, 6010C, 6020, 6020A, 7196A, 3060A, SW-846 9010B, 9030B. Organic Parameters: SW-846 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3510C, EPA 608, 624, 625, SW-846 3630C, 5030B, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 1,4-Dioxane by NJ Modified 8270, 8015B, NJ OQA-QAM-025 Rev.7, NJ EPH.)

Solid & Chemical Materials (Inorganic Parameters: SW-846, 6010B, 6010C, 6020, 6020A, 7196A, 3060A, 9010B, 9030B, 1010, 1030, 1311, 1312, 3005A, 3050B, 7471A, 7471B, 9014, 9012A, 9040B, 9045C, 9050A, 9065. Organic Parameters: SW-846 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8330, 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 3540C, 3546, 3580A, 3630C, 5030B, 5035L, 5035H, NJ OQA-QAM-025 Rev.7, NJ EPH.)

New York Department of Health Certificate/Lab ID: 11148. *NELAP Accredited.*

Drinking Water (Inorganic Parameters: SM9223B, 9222B, 9215B, EPA 200.8, 200.7, 245.2, SM5310C, EPA 332.0, SM2320B, EPA 300.0, SM2120B, 4500CN-E, 4500F-C, 4500NO3-F, 2540C, SM 2510B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: SM9221E, 9222D, 9221B, 9222B, 9215B, 5210B, 5310C, EPA 410.4, SM5220D, 2310B-4a, 2320B, EPA 200.7, 300.0, SM4500CL-E, 4500F-C, SM15 426C, EPA 350.1, SM4500NH3-BH, EPA 351.1, LACHAT 10-107-06-2, EPA 353.2, SM4500-NO3-F, 4500-NO2-B, 4500P-E, 2540C, 2540B, 2540D, EPA 200.8, EPA 6010B, 6010C, 6020, 6020A, EPA 7196A, SM3500Cr-D, EPA 245.1, 245.2, 7470A, SM2120B, LACHAT 10-204-00-1-A, 4500CN-CE, EPA 1664A, EPA 420.1, SM14 510C, EPA 120.1, SM2510B, SM4500S-D, SM5540C, EPA 3005A, 3015, 9010B, 9030B. Organic Parameters: EPA 624, 8260B, 8270C, 8270D, 625, 608, 8081A, 8081B, 8151A, 8330, 8082, 8082A, EPA 3510C, 5030B.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1010, 1030, EPA 6010B, 6010C, 7196A, 7471A, 7471B, 9012A, 9014, 9065, 9050A, EPA 1311, 1312, 3005A, 3050B, 9010B, 9030B. Organic Parameters: EPA 8260B, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8015B, 8015C, 8081A, 8081B, 8151A, 8330, 8082 8082A, 3540C, 3546, 3580, 3580A, 5030B, 5035.)

North Carolina Department of the Environment and Natural Resources Certificate/Lab ID : 666. Organic Parameters: MA-EPH, MA-VPH.

Drinking Water Program Certificate/Lab ID: 25700. (Inorganic Parameters: Chloride EPA 300.0. Organic Parameters: 524.2)

Pennsylvania Department of Environmental Protection Certificate/Lab ID : 68-03671. **NELAP Accredited.**
Drinking Water (Organic Parameters: EPA 524.2, 504.1)

Non-Potable Water (Inorganic Parameters: EPA 1312, 3005A, 200.7, 410.4, 1664A, SM2540D, 5210B, 5220D, 4500-P, BE. Organic Parameters: EPA 3510C, 3630C, 5030B, 625, 624, 608, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330)

Solid & Hazardous Waste (Inorganic Parameters: EPA 350.1, 1010, 1030, 1311, 1312, 3050B, 3060A, 6010B, 6010C, 7196A, 7471A, 9010B, 9012A, 9014, 9040B, 9045C, 9050, 9065, SM 4500NH₃-H. Organic Parameters: 3540C, 3546, 3580A, 3630C, 5035, 8015B, 8015C, 8081A, 8081B, 8082, 8082A, 8151A, 8260B, 8270C, 8270D, 8330)

Rhode Island Department of Health Certificate/Lab ID: LAO00065. **NELAP Accredited via NY-DOH.**

Refer to MA-DEP Certificate for Potable and Non-Potable Water.

Refer to NJ-DEP Certificate for Potable and Non-Potable Water.

Texas Commission on Environmental Quality Certificate/Lab ID: T104704476-09-1. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 120.1, 1664, 200.7, 200.8, 245.1, 245.2, 300.0, 350.1, 351.1, 353.2, 410.4, 420.1, 6010, 6020, 7196, 7470, 9040, SM 2120B, 2310B, 2320B, 2510B, 2540B, 2540C, 2540D, 426C, 4500CL-E, 4500CN-E, 4500F-C, 4500H+B, 4500NH₃-H, 4500NO₂B, 4500P-E, 4500 S²⁻ D, 510C, 5210B, 5220D, 5310C, 5540C. Organic Parameters: EPA 608, 624, 625, 8081, 8082, 8151, 8260, 8270, 8330.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 1312, 9012, 9014, 9040, 9045, 9050, 9065.)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460195. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 3005A, 3015, 1312, 6010B, 6010C, SM4500S-D, SM4500-CN-CE, Lachat 10-204-00-1-X. Organic Parameters: EPA 8260B)

Solid & Hazardous Waste (Inorganic Parameters: EPA 3050B, 1311, 1312, 6010B, 6010C, 9030B, 9010B, 9012A, 9014. Organic Parameters: EPA 5035, 5030B, 8260B, 8015B, 8015C.)

Department of Defense, L-A-B Certificate/Lab ID: L2217.

Drinking Water (Inorganic Parameters: SM 4500H-B. Organic Parameters: EPA 524.2, 504.1.)

Non-Potable Water (Inorganic Parameters: EPA 200.7, 200.8, 6010B, 6010C, 6020, 6020A, 245.1, 245.2, 7470A, 9040B, 9010B, 180.1, 300.0, 332.0, 6860, 353.2, 410.4, 9060, 1664A, SM 4500CN-E, 4500H-B, 4500NO₃-F, 4500CL-D, 5220D, 5310C, 2130B, 2320B, 2540C, 3005A, 3015, 9010B, 9056. Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A, 8082, 8082A, 8081A, 8081B, 3510C, 5030B, MassDEP EPH, MassDEP VPH.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 200.7, 6010B, 6010C, 7471A, 6860, 1311, 1312, 3050B, 7196A, 9010B, 9012A, 9040B, 9045C, 3500-CR-D, 4500CN-CE, 2540G, Organic Parameters: EPA 8260B, 8260C, 8270C, 8270D, 8270C-SIM, 8270D-SIM, 8330A/B-prep, 8082, 8082A, 8081A, 8081B, 3540C, 3546, 3580A, 5035A, MassDEP EPH, MassDEP VPH.)

The following analytes are not included in our current NELAP/TNI Scope of Accreditation:

EPA 8260B: Freon-113, 1,2,4,5-Tetramethylbenzene, 4-Ethyltoluene. **EPA 8330A**: PETN, Picric Acid, Nitroglycerine, 2,6-DANT, 2,4-DANT. **EPA 8270C**: Methyl naphthalene, Dimethyl naphthalene, Total Methyl naphthalenes, Total Dimethyl naphthalenes, 1,4-Diphenylhydrazine (Azobenzene). **EPA 625**: 4-Chloroaniline, 4-Methylphenol. Total Phosphorus in a soil matrix, Chloride in a soil matrix, TKN in a soil matrix, NO₂ in a soil matrix, NO₃ in a soil matrix, SO₄ in a soil matrix. **EPA 9071**: Total Petroleum Hydrocarbons, Oil & Grease

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: ALPHA ANALYTICAL

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17515 PHASE II

The cost of this analysis will be covered by EH&E Purchase Order #

For EH & E Data Coordinator - URGENT DATA ☐

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
01	134312	BULK	EPA 8082 PCBs w/ SOXHELE EXTRACTION	1315 6/29/12
02	134313			1320
03	134314			1330
04	134315			1340
05	134316		MATRIX SPEKTRUM	1347
06	134317			1352
07	134318			1400
08	134319			1405
09	134320			1410
10	134321			1420
11	134322			1427
12	134323			1430
13	134324			1435
14	134325			1445
15	134326			1454
16	134327			1459

Special instructions:

☐ Standard turn around time

☒ Rush by 72 HOUR date/time

☐ Other

☐ Fax results 781-247-4305

☐ RETURN SAMPLES

☐ Electronic transfer - datacoordinator@ehinc.com

☒ Additional report recipient ABESOL@EHINC.COM, CCAMP25AND@EHINC.COM

Each signatory please return one copy of this form to the above address

Relinquished by: Adrian S. B... of Environmental Health & Engineering, Inc. Date: 29 JUNE 2012
Received by: [Signature] of (company name) Alpha Date: 6/29/12 17:15
Relinquished by: _____ of (company name) _____ Date: _____
Received by: _____ of (company name) _____ Date: _____
Relinquished by: _____ of (company name) _____ Date: _____
Received by: _____ of (company name) _____ Date: _____
Lab Data
Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 1 of 1

TO: ALPHA ANALYTICAL

In all correspondence regarding this matter, please refer to EH&E Project # 17515 PHASE II

The cost of this analysis will be covered by EH&E Purchase Order # _____

[illegible]☐ Other _____☐ Additional report recipient

Relinquished by: Adrian S. Brzda of Environmental Health & Engineering, Inc. Date: 29 JUNE 2012

Received by: [Signature] of (company name) Alpha Date: 6/29/12 17:15

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Relinquished by: _____ of (company name) _____ Date: _____

Received by: _____ of (company name) _____ Date: _____

Lab Data

Received by: _____ of Environmental Health & Engineering, Inc. Date: _____

Page 48 of 48 WHITE-EH&E FILE COPY YELLOW-LAB COPY PINK-PROJECT MANAGER COPY GOLD-DATA COORDINATOR COPY



ANALYTICAL REPORT

Lab Number:	L1212346
Client:	Environmental Health & Engineering Inc. 117 Fourth Ave Needham, MA 02494
ATTN:	Cynthia Campisano
Phone:	(781) 247-4300
Project Name:	Not Specified
Project Number:	17515
Report Date:	07/19/12

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: NY (11627), CT (PH-0141), NH (2206), NJ NELAP (MA015), RI (LAO00299), PA (68-02089), LA NELAP (03090), FL (E87814), TX (T104704419), WA (C954), DOD (L2217.01), USDA (Permit #P330-11-00109), US Army Corps of Engineers.

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com



Project Name: Not Specified
Project Number: 17515

Lab Number: L1212346
Report Date: 07/19/12

Alpha Sample ID	Client ID	Sample Location	Collection Date/Time
L1212346-01	136736	Not Specified	07/11/12 00:00
L1212346-02	136737	Not Specified	07/11/12 00:00
L1212346-03	136738	Not Specified	07/11/12 00:00
L1212346-04	136739	Not Specified	07/11/12 00:00
L1212346-05	136740	Not Specified	07/11/12 00:00
L1212346-06	136741	Not Specified	07/11/12 00:00
L1212346-07	136742	Not Specified	07/11/12 00:00
L1212346-08	136743	Not Specified	07/11/12 00:00
L1212346-09	136744	Not Specified	07/11/12 00:00
L1212346-10	136745	Not Specified	07/11/12 00:00
L1212346-11	136746	Not Specified	07/11/12 00:00
L1212346-12	136747	Not Specified	07/11/12 00:00

Project Name: Not Specified
Project Number: 17515

Lab Number: L1212346
Report Date: 07/19/12

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet all of the requirements of NELAC, for all NELAC accredited parameters. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. Performance criteria for CAM and RCP methods allow for some LCS compound failures to occur and still be within method compliance. In these instances, the specific failures are not narrated but are noted in the associated QC table. This information is also incorporated in the Data Usability format for our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

HOLD POLICY

For samples submitted on hold, Alpha's policy is to hold samples free of charge for 30 days from the date the project is completed. After 30 days, we will dispose of all samples submitted including those put on hold unless you have contacted your Client Service Representative and made arrangements for Alpha to continue to hold the samples.

Please contact Client Services at 800-624-9220 with any questions.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Cynthia McQueen

Title: Technical Director/Representative

Date: 07/19/12

ORGANICS

SEMIVOLATILES

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-01
Client ID: 136736
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/16/12 15:57
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	57.8		ng/cart	10.0	--	1
Pentachlorobiphenyls	84.8		ng/cart	10.0	--	1
Hexachlorobiphenyls	20.8		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	163		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	90		50-125
Cl8-BZ#202-C13	84		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-02
Client ID: 136737
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/16/12 17:11
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	24.0		ng/cart	10.0	--	1
Pentachlorobiphenyls	28.9		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	52.9		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	90		50-125
Cl8-BZ#202-C13	86		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-03
Client ID: 136738
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/17/12 09:05
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	33.4		ng/cart	10.0	--	1
Pentachlorobiphenyls	40.8		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	74.2		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	94		50-125
Cl8-BZ#202-C13	87		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-04
Client ID: 136739
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/17/12 10:19
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	32.3		ng/cart	10.0	--	1
Pentachlorobiphenyls	40.4		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	72.7		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	93		50-125
Cl8-BZ#202-C13	86		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-05
Client ID: 136740
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/16/12 20:54
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	34.7		ng/cart	10.0	--	1
Pentachlorobiphenyls	47.1		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	81.8		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	93		50-125
Cl8-BZ#202-C13	87		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-06
Client ID: 136741
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/16/12 22:08
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	12.6		ng/cart	10.0	--	1
Tetrachlorobiphenyls	42.6		ng/cart	10.0	--	1
Pentachlorobiphenyls	45.4		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	101		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	95		50-125
Cl8-BZ#202-C13	88		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-07
Client ID: 136742
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/17/12 11:33
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	17.7		ng/cart	10.0	--	1
Tetrachlorobiphenyls	50.7		ng/cart	10.0	--	1
Pentachlorobiphenyls	49.4		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	118		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	89		50-125
Cl8-BZ#202-C13	84		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-08
Client ID: 136743
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/17/12 02:54
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	24.5		ng/cart	10.0	--	1
Tetrachlorobiphenyls	87.8		ng/cart	10.0	--	1
Pentachlorobiphenyls	90.8		ng/cart	10.0	--	1
Hexachlorobiphenyls	16.0		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	219		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	87		50-125
Cl8-BZ#202-C13	77		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-09
Client ID: 136744
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/17/12 04:09
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	42.4		ng/cart	10.0	--	1
Pentachlorobiphenyls	61.7		ng/cart	10.0	--	1
Hexachlorobiphenyls	13.8		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	118		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	95		50-125
Cl8-BZ#202-C13	90		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-10
Client ID: 136745
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/17/12 05:23
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	12.9		ng/cart	10.0	--	1
Tetrachlorobiphenyls	58.3		ng/cart	10.0	--	1
Pentachlorobiphenyls	71.5		ng/cart	10.0	--	1
Hexachlorobiphenyls	14.6		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	157		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	92		50-125
Cl8-BZ#202-C13	85		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-11
Client ID: 136746
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/17/12 06:37
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	89		50-125
Cl8-BZ#202-C13	85		50-125

Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**SAMPLE RESULTS**

Lab ID: L1212346-12
Client ID: 136747
Sample Location: Not Specified
Matrix: Air Cartridge
Analytical Method: 105,680/8270C-SIM(M)
Analytical Date: 07/17/12 07:51
Analyst: JS

Date Collected: 07/11/12 00:00
Date Received: 07/12/12
Field Prep: Not Specified
Extraction Method: EPA 3540C
Extraction Date: 07/12/12 09:46

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab						
Monochlorobiphenyls	ND		ng/cart	10.0	--	1
Dichlorobiphenyls	ND		ng/cart	10.0	--	1
Trichlorobiphenyls	ND		ng/cart	10.0	--	1
Tetrachlorobiphenyls	ND		ng/cart	10.0	--	1
Pentachlorobiphenyls	ND		ng/cart	10.0	--	1
Hexachlorobiphenyls	ND		ng/cart	10.0	--	1
Heptachlorobiphenyls	ND		ng/cart	10.0	--	1
Octachlorobiphenyls	ND		ng/cart	10.0	--	1
Nonachlorobiphenyls	ND		ng/cart	10.0	--	1
Decachlorobiphenyl	ND		ng/cart	10.0	--	1
Total Homologs	ND		ng/cart	10.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	94		50-125
Cl8-BZ#202-C13	86		50-125

Project Name: Not Specified

Lab Number: L1212346

Project Number: 17515

Report Date: 07/19/12

Method Blank Analysis Batch Quality Control

Analytical Method: 105,680/8270C-SIM(M)

Extraction Method: EPA 3540C

Analytical Date: 07/16/12 13:29

Extraction Date: 07/12/12 09:46

Analyst: JS

Parameter	Result	Qualifier	Units	RL	MDL
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab for sample(s): 01-12 Batch: WG547933-1					
Monochlorobiphenyls	ND		ng/cart	10.0	--
Dichlorobiphenyls	ND		ng/cart	10.0	--
Trichlorobiphenyls	ND		ng/cart	10.0	--
Tetrachlorobiphenyls	ND		ng/cart	10.0	--
Pentachlorobiphenyls	ND		ng/cart	10.0	--
Hexachlorobiphenyls	ND		ng/cart	10.0	--
Heptachlorobiphenyls	ND		ng/cart	10.0	--
Octachlorobiphenyls	ND		ng/cart	10.0	--
Nonachlorobiphenyls	ND		ng/cart	10.0	--
Decachlorobiphenyl	ND		ng/cart	10.0	--
Total Homologs	ND		ng/cart	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Cl3-BZ#19-C13	91		50-125
Cl8-BZ#202-C13	84		50-125

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 17515

Lab Number: L1212346

Report Date: 07/19/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-12 Batch: WG547933-2								
Cl1-BZ#1	104		-		40-140	-		30
CL1-BZ#3	100		-		40-140	-		30
Cl2-BZ#4/#10	120		-		40-140	-		30
Cl2-BZ#8	97		-		40-140	-		30
Cl3-BZ#19	94		-		40-140	-		30
Cl3-BZ#18	92		-		40-140	-		30
Cl2-BZ#15	99		-		40-140	-		30
Cl4-BZ#54	102		-		40-140	-		30
Cl3-BZ#29	91		-		40-140	-		30
Cl4-BZ#50	93		-		40-140	-		30
Cl3-BZ#-31	88		-		40-140	-		30
Cl3-BZ#28	94		-		40-140	-		30
Cl4-BZ#45	93		-		40-140	-		30
Cl4-BZ#52	95		-		40-140	-		30
Cl4-BZ#49	86		-		40-140	-		30
Cl5-BZ#104	109		-		40-140	-		30
Cl4-BZ#47	97		-		40-140	-		30
Cl4-BZ#44	97		-		40-140	-		30
Cl3-BZ#37	61		-		40-140	-		30
Cl5-BZ#121/#95/#88	90		-		40-140	-		30
Cl4-BZ#74	88		-		40-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 17515

Lab Number: L1212346

Report Date: 07/19/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-12 Batch: WG547933-2								
Cl6-BZ#155	94		-		40-140	-		30
Cl4-BZ#70	86		-		40-140	-		30
Cl4-BZ#66	90		-		40-140	-		30
Cl5-BZ#101/#90	107		-		40-140	-		30
Cl4-BZ#56	90		-		40-140	-		30
Cl5-BZ#99	98		-		40-140	-		30
Cl5-BZ#87/#111	87		-		40-140	-		30
Cl6-BZ#154	93		-		40-140	-		30
Cl5-BZ#110	109		-		40-140	-		30
Cl4-BZ#81	86		-		40-140	-		30
Cl6-BZ#151	81		-		40-140	-		30
Cl6-BZ#147/#149	79		-		40-140	-		30
Cl4-BZ#77	69		-		40-140	-		30
Cl5-BZ#107/#123	94		-		40-140	-		30
Cl7-BZ#188	74		-		40-140	-		30
Cl5-BZ#118	87		-		40-140	-		30
Cl6-BZ#146	72		-		40-140	-		30
Cl5-BZ#114	78		-		40-140	-		30
Cl6-BZ#153	82		-		40-140	-		30
Cl5-BZ#105	64		-		40-140	-		30
Cl6-BZ#138	68		-		40-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 17515

Lab Number: L1212346

Report Date: 07/19/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-12 Batch: WG547933-2								
Cl6-BZ#129/#158	89		-		40-140	-		30
Cl7-BZ#187	78		-		40-140	-		30
Cl7-BZ#183	73		-		40-140	-		30
Cl5-BZ#126	58		-		40-140	-		30
Cl7-BZ#174	80		-		40-140	-		30
Cl6-BZ#128	79		-		40-140	-		30
Cl6-BZ#167	76		-		40-140	-		30
Cl8-BZ#202	84		-		40-140	-		30
Cl7-BZ#177	75		-		40-140	-		30
Cl8-BZ#204/#200-CAL	80		-		40-140	-		30
Cl6-BZ#156	66		-		40-140	-		30
Cl6-BZ#157	79		-		40-140	-		30
Cl7-BZ#180	79		-		40-140	-		30
Cl8-BZ#201	80		-		40-140	-		30
Cl7-BZ#170	75		-		40-140	-		30
Cl6-BZ#169	71		-		40-140	-		30
Cl9-BZ#208	78		-		40-140	-		30
Cl7-BZ#189	71		-		40-140	-		30
Cl8-BZ#195	73		-		40-140	-		30
Cl8-BZ#194	72		-		40-140	-		30
Cl8-BZ#205	71		-		40-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: Not Specified

Project Number: 17515

Lab Number: L1212346

Report Date: 07/19/12

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
PCB Homologs by GC/MS-SIM (LowVol) - Mansfield Lab Associated sample(s): 01-12 Batch: WG547933-2								
Cl9-BZ#206	70		-		40-140	-		30
Cl10-BZ#209	79		-		40-140	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Cl3-BZ#19-C13	90				50-125
Cl8-BZ#202-C13	84				50-125

Project Name: Not Specified

Lab Number: L1212346

Project Number: 17515

Report Date: 07/19/12

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Reagent H2O Preserved Vials Frozen on: NA

Cooler Information Custody Seal

Cooler

A Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1212346-01A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-02A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-03A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-04A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-05A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-06A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-07A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-08A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-09A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-10A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-11A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)
L1212346-12A	PUF Air Cartridge - High or Low	A	N/A	2.8	Y	Absent	A2-PCBHOMS-8270SIML(7)

*Values in parentheses indicate holding time in days

Project Name: Not Specified

Lab Number: L1212346

Project Number: 17515

Report Date: 07/19/12

GLOSSARY

Acronyms

EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NI	- Not Ignitable.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than five times (5x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit.
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The RPD between the results for the two columns exceeds the method-specified criteria; however, the lower value has been reported due to obvious interference.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

Report Format: Data Usability Report



Project Name: Not Specified**Lab Number:** L1212346**Project Number:** 17515**Report Date:** 07/19/12**Data Qualifiers**

- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

Project Name: Not Specified
Project Number: 17515

Lab Number: L1212346
Report Date: 07/19/12

REFERENCES

- 105 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IIIA, 1997 in conjunction with Determination of Pesticides and PCBs in Water and Oil/Sediment by GC/MS: Method 680. EPA 01A0005295, November 1985.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



Certificate/Approval Program Summary

Last revised May 10, 2012 – Mansfield Facility

The following list includes only those analytes/methods for which certification/approval is currently held. For a complete listing of analytes for the referenced methods, please contact your Alpha Customer Service Representative.

Connecticut Department of Public Health Certificate/Lab ID: PH-0141.

Wastewater/Non-Potable Water (Inorganic Parameters: pH, Turbidity, Conductivity, Alkalinity, Aluminum, Antimony, Arsenic, Barium, Beryllium, Boron, Cadmium, Calcium, Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Strontium, Thallium, Tin, Titanium, Vanadium, Zinc, Total Residue (Solids), Total Suspended Solids (non-filterable). Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Acid Extractables, Benzidines, Phthalate Esters, Nitrosamines, Nitroaromatics & Isophorone, PAHs, Haloethers, Chlorinated Hydrocarbons, Volatile Organics.)

Solid Waste/Soil (Inorganic Parameters: pH, Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Calcium, Chromium, Hexavalent Chromium, Cobalt, Copper, Iron, Lead, Magnesium, Manganese, Mercury, Molybdenum, Nickel, Potassium, Selenium, Silver, Sodium, Thallium, Titanium, Vanadium, Zinc, Total Organic Carbon, Corrosivity, TCLP 1311, SPLP 1312. Organic Parameters: PCBs, Organochlorine Pesticides, Technical Chlordane, Toxaphene, Volatile Organics, Acid Extractables, Benzidines, Phthalates, Nitrosamines, Nitroaromatics & Cyclic Ketones, PAHs, Haloethers, Chlorinated Hydrocarbons.)

Florida Department of Health Certificate/Lab ID: E87814. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, SM2540G.)

Solid & Chemical Materials (Inorganic Parameters: 6020, 7470, 7471, 9045. Organic Parameters: EPA 8260, 8270, 8082, 8081.)

Air & Emissions (EPA TO-15.)

Louisiana Department of Environmental Quality Certificate/Lab ID: 03090. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 245.7, 1631E, 3020A, 6020A, 7470A, 9040, 9050A, SM2320B, 2540D, 2540G, 4500H-B, Organic Parameters: EPA 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 5030B, 8015D, 3570, 8081B, 8082A, 8260B, 8270C, 8270D.)

Solid & Chemical Materials (Inorganic Parameters: EPA 1311, 3050B, 3051A, 3060A, 6020A, 7196A, 7470A, 7471B, 7474, 9040B, 9045C, 9060. Organic Parameters: EPA 3540C, 3570, 3580A, 3630C, 3640A, 3660, 3665A, 5035, 8015D, 8081B, 8082A, 8260B, 8270C, 8270D.)

Biological Tissue (Inorganic Parameters: EPA 6020A. Organic Parameters: EPA 3570, 3510C, 3610B, 3630C, 3640A, 8270C, 8270D.)

Air & Emissions (EPA TO-15.)

New Hampshire Department of Environmental Services Certificate/Lab ID: 2206. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: EPA 180.1, 1631E, 6020A, 7470A, 9040B, 9050A, SM2540D, 2540G, 4500H+B, 2320B. Organic Parameters: EPA 8081B, 8082A, 8270C, 8270D, 8015D.)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 3050B, 3051A, 3060A, 6020A, 7470A, 7471B, 9040B, 9045C, 7196A. Organic Parameters: SW-846 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 8270C, 8015D, 8082A, 8081B.)

New Jersey Department of Environmental Protection Certificate/Lab ID: MA015. *NELAP Accredited.*

Non-Potable Water (Inorganic Parameters: SW-846 1312, 3020A, SM2320B, SM2540D, 2540G, 4500H-B, EPA 180.1, 1631E, SW-846 7470A, 9040B, 9040C, 6020A, 9050A. Organic Parameters: SW-846 3510C, 3580A, 3630C, 3640A, 3660B, 3665A, 8015D, 8081B, 8082A, 8270C, 8270D)

Solid & Chemical Materials (Inorganic Parameters: SW-846 1311, 1312, 3050B, 3051A, 6020A, 7471B, 7474, 9040B, 9040C, 9045C, 9060. Organic Parameters: SW-846 3540C, 3570, 3580A, 3630C, 3640A, 3660B, 3665A, 8081B, 8082A, 8270C, 8270D, 8015D.)

Atmospheric Organic Parameters (EPA 3C, TO-15)

Biological Tissue (Inorganic Parameters: SW-846 6020A. Organic Parameters: SW-846 8270C, 8270D, 3510C, 3570, 3610C, 3630C, 3640A)

New York Department of Health Certificate/Lab ID: 11627. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: SM2320B, SM2540D, 6020A, 1631E, 245.7, 7470A, 9050A, EPA 180.1, 3020A. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 3510C.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A, 7471B, 7474. Organic Parameters: EPA 8270C, 8270D, 8081B, 8082A, 1311, 3050B, 3580A, 3570, 3051A.)

Air & Emissions (EPA TO-15.)

Pennsylvania Certificate/Lab ID: 68-02089 **NELAP Accredited**

Solid & Hazardous Waste (Inorganic Parameters: EPA 6020A, 7471B, 7474. Organic Parameters: EPA 3050B, 3540C, 3630C, 8270C, 8081B, 8015D, 8082A.)

Rhode Island Department of Health Certificate/Lab ID: LAO00299. **NELAP Accredited via LA-DEQ.**

Refer to NJ-DEP Certificate for Non-Potable Water.

Texas Commission of Environmental Quality Certificate/Lab ID: T104704419-08-TX. **NELAP Accredited.**

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 1311, 7196, 9040, 9045, 9060. Organic Parameters: EPA 8015, 8270, 8081, 8082.)

Air (Organic Parameters: EPA TO-15)

Virginia Division of Consolidated Laboratory Services Certificate/Lab ID: 460194. **NELAP Accredited.**

Non-Potable Water (Inorganic Parameters: EPA 3020A, 6020A, 245.7, 9040B, SM4500H-B. Organic Parameters: EPA 3510C, 3640A, 3660B, 3665A, 8270C, 8270D, 8082A, 8081B.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020A, 7470A, 7471B, 9040B, 9045C, 3050B, 3051, 9060. Organic Parameters: EPA 3540C, 3580A, 3630C, 3640A, 3660B, 3665A, 3570, 8270C, 8270D, 8081B, 8082A, 8015D.)

Washington State Department of Ecology Certificate/Lab ID: C954. *Non-Potable Water* (Inorganic Parameters: SM2540D, 180.1, 1631E.)

Solid & Chemical Materials (Inorganic Parameters: EPA 6020, 7470, 7471, 7474, 9045C, 9050A, 9060. Organic Parameters: EPA 8081, 8082, 8015 Mod, 8270.)

U.S. Army Corps of Engineers

Department of Defense, L-A-B Certificate/Lab ID: L2217.01.

Non-Potable Water (Inorganic Parameters: EPA 6020A, SM4500H-B. Organic Parameters: 3020A, 3510C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH, 8082A, 8081B, 8015D-SHC, 8015D.)

Solid & Hazardous Waste (Inorganic Parameters: EPA 1311, 3050B, 6020A, 7471A, 9045C, 9060, SM 2540G, ASTM D422-63. Organic Parameters: EPA 3580A, 3570, 3540C, 8270C, 8270D, 8270C-ALK-PAH, 8270D-ALK-PAH 8082A, 8081B, 8015D-SHC, 8015D.)

Air & Emissions (EPA TO-15.)

Analytes Not Accredited by NELAP

Certification is not available by NELAP for the following analytes: **8270C**: Biphenyl. **TO-15**: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 2-Methylnaphthalene, 1-Methylnaphthalene.

CHAIN OF CUSTODY FORM

Serial No. 071216:40

DATE: 7/11/12

FROM: Environmental Health and Engineering, Inc.
117 Fourth Avenue
Needham, MA 02494-2725

TO: Alpha

Please send invoices to ATTN: Accounts Payable
Please send reports to ATTN: Data Coordinator

In all correspondence regarding this matter, please refer to EH&E Project # 17515

The cost of this analysis will be covered by EH&E Purchase Order # 17515

For EH & E Data Coordinator - URGENT DATA ☐

	SAMPLE ID	SAMPLE TYPE	ANALYTICAL METHOD/NUMBER	OTHER:Time/Date/Vol.
-01	136736	Air	PCBs Homolog Analysis	1416.1 L
-02	136737			1428
-03	136738			1415.35
-04	136739			1391.8
-05	136740			1415.35
-06	136741			1398.66
-07	136742			1379.07
-08	136743			1375.4
-09	136744			1180.7
-10	136745			1371.5
-11	136746			1407
-12	136747			Ø
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Special instructions:

☐ Standard turn around time

☒ Rush by 5 days TAT
date/time

☐ Other _____

☐ Fax results 781-247-4305

☐ RETURN SAMPLES

☒ Electronic transfer - datacoordinator@eheinc.com

☐ Additional report recipient

truong@eheinc.com

Each signatory please return one copy of this form to the above address

Relinquished by: [Signature] of Environmental Health & Engineering, Inc.

Date: 7/12/12

Received by: Nate Se of (company name) Alpha

Date: 7/12/12

Relinquished by: _____ of (company name) _____

Date: _____

Received by: _____ of (company name) _____

Date: _____

Relinquished by: _____ of (company name) _____

Date: _____

Received by: _____ of (company name) _____

Date: _____

Lab Data

Received by: _____ of Environmental Health & Engineering, Inc.

Date: _____

Page 1 of 1

2.8°C
07:25
7/12/12

APPENDIX C
HOMOLOG CONCENTRATIONS IN AIR

APPENDIX C HOMOLOG CONCENTRATIONS IN AIR

Table C.1 Polychlorinated Biphenyl Homologs Detected—Air Samples, Field Elementary School, Weston, Massachusetts, July 11, 2012

Sample ID	Location	Parameter ¹	Results (ng/m ³)
136736	Second floor corridor	Monochlorobiphenyls	<7.06
		Dichlorobiphenyls	<7.06
		Trichlorobiphenyls	<7.06
		Tetrachlorobiphenyls	40.82
		Pentachlorobiphenyls	59.88
		Hexachlorobiphenyls	14.69
		Heptachlorobiphenyls	<7.06
		Octachlorobiphenyls	<7.06
		Nonachlorobiphenyls	<7.06
		Decachlorobiphenyl	<7.06
		Total Homologs	115.10
136737	Gym	Monochlorobiphenyls	<7.00
		Dichlorobiphenyls	<7.00
		Trichlorobiphenyls	<7.00
		Tetrachlorobiphenyls	16.81
		Pentachlorobiphenyls	20.24
		Hexachlorobiphenyls	<7.00
		Heptachlorobiphenyls	<7.00
		Octachlorobiphenyls	<7.00
		Nonachlorobiphenyls	<7.00
		Decachlorobiphenyl	<7.00
		Total Homologs	37.04
136738	Room 14	Monochlorobiphenyls	<7.07
		Dichlorobiphenyls	<7.07
		Trichlorobiphenyls	<7.07
		Tetrachlorobiphenyls	23.60
		Pentachlorobiphenyls	28.83
		Hexachlorobiphenyls	<7.07
		Heptachlorobiphenyls	<7.07
		Octachlorobiphenyls	<7.07
		Nonachlorobiphenyls	<7.07
		Decachlorobiphenyl	<7.07
		Total Homologs	52.43
136739	Room 14	Monochlorobiphenyls	<7.18
		Dichlorobiphenyls	<7.18
		Trichlorobiphenyls	<7.18
		Tetrachlorobiphenyls	23.21
		Pentachlorobiphenyls	29.03
		Hexachlorobiphenyls	<7.18
		Heptachlorobiphenyls	<7.18
		Octachlorobiphenyls	<7.18
		Nonachlorobiphenyls	<7.18
		Decachlorobiphenyl	<7.18
		Total Homologs	52.23

Table C.1 Continued

Sample ID	Location	Parameter ¹	Results (ng/m ³)
136740	Room 15	Monochlorobiphenyls	<7.07
		Dichlorobiphenyls	<7.07
		Trichlorobiphenyls	<7.07
		Tetrachlorobiphenyls	24.52
		Pentachlorobiphenyls	33.28
		Hexachlorobiphenyls	<7.07
		Heptachlorobiphenyls	<7.07
		Octachlorobiphenyls	<7.07
		Nonachlorobiphenyls	<7.07
		Decachlorobiphenyl	<7.07
		Total Homologs	57.79
136741	Cafeteria	Monochlorobiphenyls	<7.15
		Dichlorobiphenyls	<7.15
		Trichlorobiphenyls	9.01
		Tetrachlorobiphenyls	30.46
		Pentachlorobiphenyls	32.46
		Hexachlorobiphenyls	<7.15
		Heptachlorobiphenyls	<7.15
		Octachlorobiphenyls	<7.15
		Nonachlorobiphenyls	<7.15
		Decachlorobiphenyl	<7.15
		Total Homologs	72.21
136742	Room 7	Monochlorobiphenyls	<7.25
		Dichlorobiphenyls	<7.25
		Trichlorobiphenyls	12.83
		Tetrachlorobiphenyls	36.76
		Pentachlorobiphenyls	35.82
		Hexachlorobiphenyls	<7.25
		Heptachlorobiphenyls	<7.25
		Octachlorobiphenyls	<7.25
		Nonachlorobiphenyls	<7.25
		Decachlorobiphenyl	<7.25
		Total Homologs	85.56
136743	Basement corridor	Monochlorobiphenyls	<7.27
		Dichlorobiphenyls	<7.27
		Trichlorobiphenyls	17.81
		Tetrachlorobiphenyls	63.84
		Pentachlorobiphenyls	66.02
		Hexachlorobiphenyls	11.63
		Heptachlorobiphenyls	<7.27
		Octachlorobiphenyls	<7.27
		Nonachlorobiphenyls	<7.27
		Decachlorobiphenyl	<7.27
		Total Homologs	159.23

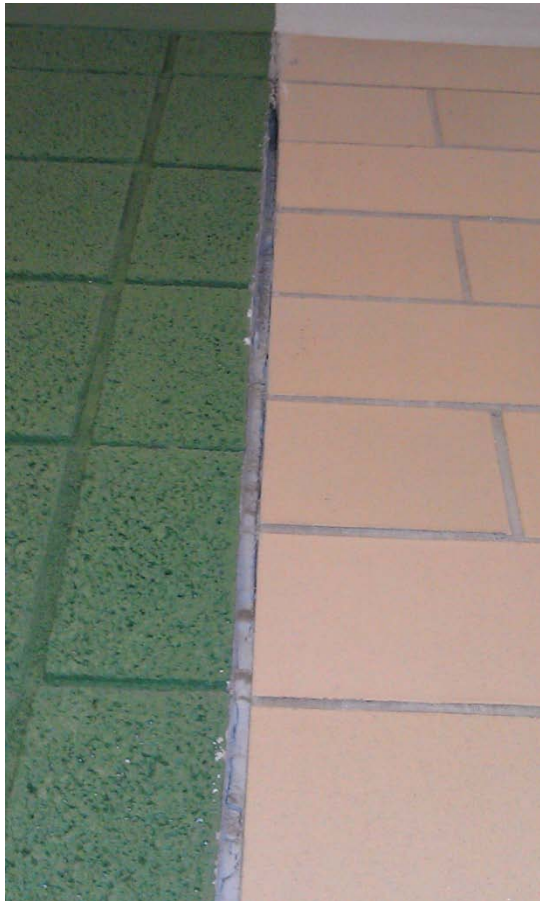
Table C.1 Continued

Sample ID	Location	Parameter ¹	Results (ng/m ³)
136744	Loading dock	Monochlorobiphenyls	<8.47
		Dichlorobiphenyls	<8.47
		Trichlorobiphenyls	<8.47
		Tetrachlorobiphenyls	35.91
		Pentachlorobiphenyls	52.26
		Hexachlorobiphenyls	11.69
		Heptachlorobiphenyls	<8.47
		Octachlorobiphenyls	<8.47
		Nonachlorobiphenyls	<8.47
		Decachlorobiphenyl	<8.47
		Total Homologs	99.94
136745	Room 27	Monochlorobiphenyls	<7.29
		Dichlorobiphenyls	<7.29
		Trichlorobiphenyls	9.41
		Tetrachlorobiphenyls	42.51
		Pentachlorobiphenyls	52.13
		Hexachlorobiphenyls	10.65
		Heptachlorobiphenyls	<7.29
		Octachlorobiphenyls	<7.29
		Nonachlorobiphenyls	<7.29
		Decachlorobiphenyl	<7.29
		Total Homologs	114.47
136746	Outdoors	Monochlorobiphenyls	<7.11
		Dichlorobiphenyls	<7.11
		Trichlorobiphenyls	<7.11
		Tetrachlorobiphenyls	<7.11
		Pentachlorobiphenyls	<7.11
		Hexachlorobiphenyls	<7.11
		Heptachlorobiphenyls	<7.11
		Octachlorobiphenyls	<7.11
		Nonachlorobiphenyls	<7.11
		Decachlorobiphenyl	<7.11
		Total Homologs	<7.11
136747	Field blank	Monochlorobiphenyls	ND
		Dichlorobiphenyls	ND
		Trichlorobiphenyls	ND
		Tetrachlorobiphenyls	ND
		Pentachlorobiphenyls	ND
		Hexachlorobiphenyls	ND
		Heptachlorobiphenyls	ND
		Octachlorobiphenyls	ND
		Nonachlorobiphenyls	ND
		Decachlorobiphenyl	ND
		Total Homologs	ND

ng/m³ nanograms per cubic meter
 ND Not detected above analytical detection limit

APPENDIX D
PHOTOGRAPHS

PHOTOGRAPHS



Photograph D.1 Typical Transition Joint Caulk



Photograph D.2 Painted Caulk at Joint



Photograph D.3 Foundation Wall Paint Sample Location, Cafeteria



Photograph D.4 Grey Floor Paint



Photograph D.5 Caulk at Transition Joint near Column

APPENDIX E

NOTIFICATION COVER LETTERS



Environmental Health
& Engineering, Inc.

117 Fourth Avenue
Needham, MA
02494-2725

TEL 800-825-5343
781-247-4300
FAX 781-247-4305

www.eheinc.com

July 30, 2012

Mr. Michael Hurley
Bureau of Waste Prevention
Massachusetts Department of Environmental Protection
One Winter Street
Boston, MA 02108

RE: Written Notification for Removal and Encapsulation of PCB-Containing Building Materials for the Field Elementary School, 99 School Street, Weston, Massachusetts (EH&E 17515)

Dear Mr. Hurley:

To fulfill notification requirements of the U.S. Environmental Protection Agency (EPA) Title 40 Code of Federal Regulations (CFR) 761.61(a)(3)(i), please find the enclosed work plan for the removal and encapsulation of polychlorinated biphenyl (PCB)-containing building materials located at the Field Elementary School, 99 School Street, Weston, Massachusetts.

If you have any questions, please feel free to contact me at 1-800-TALK EHE (1-800-825-5343).

Sincerely,

A handwritten signature in dark ink, reading "Cynthia D. Campisano". The signature is fluid and cursive, with the first name "Cynthia" and last name "Campisano" clearly legible, and a middle initial "D." in between.

Cynthia Campisano, PG
Senior Scientist/Project Manager

Enclosure

(Via FedEx Overnight Delivery)



Environmental Health
& Engineering, Inc.
117 Fourth Avenue
Needham, MA
02494-2725

TEL 800-825-5343
781-247-4300
FAX 781-247-4305

July 30, 2012

Wendy Diotalevi, RS
Public Health Director
Board of Health
Weston Town Hall
Town House Road, P.O. Box 378
Weston, MA 02493

RE: Written Notification for Removal and Encapsulation of PCB-Containing Building Materials for the Field Elementary School, 99 School Street, Weston, Massachusetts (EH&E 17515)

Dear Ms. Diotalevi:

To fulfill notification requirements of the U.S. Environmental Protection Agency (EPA) Title 40 Code of Federal Regulations (CFR) 761.61(a)(3)(i), please find the enclosed work plan for the removal and encapsulation of polychlorinated biphenyl (PCB)-containing building materials located at the Field Elementary School, 99 School Street, Weston, Massachusetts.

If you have any questions, please feel free to contact me at 1-800-TALK EHE (1-800-825-5343).

Sincerely,

A handwritten signature in black ink that reads "Cynthia D. Campisano". The signature is fluid and cursive, with the first name "Cynthia" and last name "Campisano" clearly legible.

Cynthia Campisano, PG
Senior Scientist/Project Manager

Enclosure

(Via FedEx Overnight Delivery)